Medical record; a national review of medicine and surgery

SERIAL Historical Collection COPY 1

Columbia University
in the City of New York

College of Physicians and Surgeons

Library

rebind AUG 11 1944 DLG

John L. Hildreth

THE
NEW YORK
MEDICAL JOURNAL.

EDITOR:

EDWARD S. DUNSTER, M. D.

VOLUME IX.

E PUR SI MUOVE

NEW YORK:
D. APPLETON AND COMPANY,
90, 92 & 94 GRAND STREET.
1869.

PRINCIPAL CONTRIBUTORS TO THE PRESENT VOLUME.

AUSTIN FLINT, Sr., M. D., Professor of Theory and Practice of Medicine in the Bellevue Hospital Medical College, New York City.

WILLIAM R. WHITEHEAD, M. D., New York City.

D. H. GOODWILLIE, M. D., D. D. S., New York City.

STEPHEN ROGERS, M. D., Surgeon to the Demilt Dispensary, New York City.

ROBERT D. NESMITH, M. D., New York City.

GEORGE A. PETERS, M. D., Surgeon to the New York Hospital, etc., New York City.

P. C. BARKER, M. D., Morristown, New Jersey.

A. T. WOODWARD, M. D., Brandon, Vermont.

JAMES R. WOOD, M. D., Professor of Surgery, Bellevue Hospital Medical College, New York City.

HENRY D. NOYES, M. D., Professor of Ophthalmology, Bellevue Hospital Medical College New York City.

A. M. POLLOCK, M. D., Pittsburg, Pa.

J. W. S. GOULEY, M. D., Professor of Clinical Surgery, University of New York, New York City.

W. T. WRAGG, M. D., Charleston, S. C.

D. B. ST. JOHN ROOSA, M. D., Clinical Professor of Aural Surgery, University of New York, New York City.

A. B. ARNOLD, M. D., Baltimore, Maryland.

W. T. LUSK, M. D., Professor of Physiology, Long Island Medical College Hospital, New York.

FREDERICK D. LENTE, M. D., Cold Spring, N. Y.

ALBERT T. WHEELOCK, M. D., Belfast, Maine.

A. CALKINS, M. D., New York City.

F. R. STURGIS, M. D., New York City.

E. L. KEYES, M. D., New York City.

D. PRINCE, M. D., Jacksonville, Illinois.

MEREDITH CLYMER, M. D., New York City.

A. B. CROSBY, M. D., Professor of Surgery, Medical Department, University of Vermont.

LEROY M. YALE, M. D., New York City.

GEORGE T. ELLIOT, Jr., M. D., Professor of Obstetrics in the Bellevue Hospital Medical College, New York City.

JOSEPH CREAMER, M. D., Brooklyn, New York.

CHARLES F. TAYLOR, M. D., New York City.

M. V. B. HOWELL, M. D., Moulton, Iowa.

ANDREW H. SMITH, M. D., Lecturer on Materia Medica, Long Island Medical College Hospital, New York City.

IRETUS G. CARDNER, M. D., New York City.

EDWARD HULL, M. D., Auburn, New York.

F. W. PAVY, M. D., London, England.

BUCKMINSTER BROWN, M. D., Boston, Mass.

T. EDWARDS CLARK, M. D., New York City.

WALTER LAMBERT, M. B., Amherstburg, Canada.

INDEX TO VOL. IX.

PAGE
A Substitute for the Ligature, 356
A Well-paid Operation, 437
About Cilia, 439
Acid, Carbolic, 152, 332
Acid Lactic, in the Treatment of Croup, 637
Acid, Phosphoric, the Use of, in Diabetes, 82
Acid, Sulphurous, in the Treatment of Pyrosis, 89
Aconite, Tincture of, in Ovarian Neuralgia, 85
Acupressure, an Essay on, 225
Addison's Disease, 553
Albinismus and Nigrismus, 303
Albuminuria in a Child seven Weeks old, 312
Alopecia. Causes of its Greater Frequency in Men than Women, 304
Alopecia Pityrodes, 308
American Medical Association, 92
Ammonium, Chloride of, in Ovarian Neuralgia, 85
Amherst College, Physical Culture at, 644
Amputation at Hip-Joint, 72
Anæsthesia, some Phenomena of, 333
Anæsthetics and their Administration, 15
Anæsthetics, the Action of, on the Blood-Corpuscles, 411
Aneurism, Carotid, Cure of, by Digital Compression, 439
Aneurism of the Ascending Aorta, treated by Galvano-Puncture, 134
Aneurism, Traumatic, of the Uterine Artery, 183
Anus, Artificial, 67, 68, 76,
Apoplexy in a Boy fifteen Years of Age, 551
Area Celsi, Observations on, 303
Army Personal 334
Arnold, A. B. M. D., on Circumcision, 514
Arsenic, Action of, with Special Reference to Skin-Diseases, 306
Arsenic in Consumption, 126
Asphyxia in Children, a Simple Mode of performing Artificial Respiration in, 560

PAGE
Asthma, Treatment of, by Belladonna, ... 555
Atlas, Dislocation of, with Fracture of the Odontoid Process and Second Cervical Vertebra, ... 29
Aural Disease, Report of 500 Cases. By D. B. St. John Roosa, M. D., 497

Barker, P. C., M. D., on the Action of Opium, as a Parturient Agent, ... 261
Baths, Hot, in Infantile Erysipelas, ... 316
Beer, poisoned, ... 441
Belladonna in Infantile Icterus, ... 314
Belladonna, on the Action of, ... 79
Belladonna, the Use of, in Asthma, ... 555
Birth of a Large Child, ... 112
Bismuth in the Treatment of Dysentery, ... 638
Bites of Insects, ... 445
Bladder, the Examination of, ... 73
Bladder, the Power of Absorption by the, ... 223
Blood-Corpuscles, the Action of Anæsthetics on, ... 411
Books and Pamphlets received, . 66, 167, 293, 393, 543, 620
Boston Medical and Surgical Journal, ... 64
Brain, History of a Severe Case of Injury of, ... 69
Brain, Weight of 446
Bright's Disease, Prognosis in, ... 337, 368
Brown, Buckminster, M. D., Reply to Review of his Work on Orthopædics, ... 639
Brown-Séquard, a Visit to, ... 433
Buboes, ... 171

Cæsarian Section by means of Vienna Paste, ... 199
Calculi discharged from Kidney, through Fistulous Opening in Lumbar Region, ... 71
Calculus, Impaction of, in Urethra, causing Retention of Urine, 311
Calkins, A., M. D., Case of Poisoning of an Infant, by Laudanum. . 367
Cancer, Epithelial, Origin of, ... 418
Cancer, Uterine, an Inquiry into the Pathology of, ... 561
Carbolic Acid, Discussion on Uses of, ... 152
Carbolic Acid, Fatal Poisoning from, ... 220
Carbolic Acid in Burns, ... 332
Carbolic Acid in Synovitis, ... 595
Cardner, I. G., M. D., Studies in Materia Medica, . . . 126
Caution to Ovariotomists, ... 642
Cervix Uteri, Rupture of, ... 208
Cervix Uteri, Surgery of, ... 49
Chancroids, ... 174
Chestnut-Leaves, the Use of, in Pertussis, ... 90

PAGE
Chilblains, Treatment of, by the Perchloride of Iron, . . 310
Chloroform, Death from, ... 95, 641
Chloroform, Local Use of, in Trismus Nascentium, . . 313
Cholagogue Action of Mercury, ... 651
Cholera, the Supposed Fungus of, ... 646
Chromidrosis, Case of, ... 304
Cilia, Note on, ... 439
Circumcision. By A. B. Arnold, M. D., ... 514
Claude Bernard, a Senator, ... 435
Cleft of the Hard Palate, Surgical Treatment of, . . . 1
Cohnheim's Alleged Discovery, ... 107
Compression in the Cure of Carotid Aneurism, . . . 439
Condylomata, Dressing for, ... 175
Consumption, Use of Arsenic in, ... 126
Consumptive, Fresh Air for the, ... 213
Corpuscles, Escape of White, through Walls of Vessels, . 107
Creamer, Joseph, M. D., on External Perineal Urethrotomy, 139
Criticism on Dr. Taylor's Paper on Differential Diagnosis in Diseases of the Spine, ... 425
Croup, Local Treatment of, ... 637
Cubic Space *vs.* Pyæmia, ... 219
Culture, Physical, at Amherst College, . . . 644
Cystitis, Chronic, the Use of Sulphite of Soda in, . . . 87
Death, Modes of Distinguishing True and Apparent, . . 654
Deaths from Chloroform, ... 95, 641
Dermatology, Report on, ... 294
Diabetes, Phosphoric Acid in the Treatment of, . . . 82
Diabetes, the Use of Opium in, ... 547
Diagnosis, Differential, in Disease of the Spine, . . . 113
Diagnosis of Lung-Diseases in Children, . . . 317
Digitalis in Gonorrhœa, ... 169
Discoloration of Skin from Internal Use of Oxide of Silver, . 305
Dissections, Preservation of Specimens for, . . . 220
Dyspnœa, Inhalation of Oxygen in Cases of, . . . 147
Dyspnœa, the Diagnosis of, ... 544
Dysentery, Treatment of, by Large Doses of Ipecacuanha, . 546
Dysentery, Treatment of, by Large Doses of Subnitrate of Bismuth, 638

Eczema Marginatum, Pathology of, ... 302
Eczema, Sedatives in the Treatment of, . . . 310
Education, Medical, ... 221
Elliot, Geo. T., M. D., Address at O. Æ. Society, of Bellevue Hospital Medical College, ... 93
Embolisms, Diffuse Capillary, in Febrile Diseases, . . 112
Epilepsy, Lactate of Zinc in, ... 77

PAGE

Epilepsy, of Syphilitic Origin, 172
Ergot of Rye in Hæmoptysis, 77
Erysipelas, Infantile, Treatment of, by Hot Baths, 316
Examination of the Bladder, 73
Extra-Uterine Pregnancy, 178, 179

Femur, Fractures of, 365
Fever, Typhoid, the Treatment of, 549, 556
Fever, Yellow, at Wilmington, N. C., in 1862, 478
Fistula communicating with Kidney through Lumbar Region, 71
Flint, Austin, Sr., M. D., a Case of Fracture of the Odontoid Process and Body of the Second Vertebra, with Dislocation of the Atlas, 29
Flint, Austin, Sr., M. D., Remarks on the Prognosis in Bright's Diseases, 337
Fœtus, Discharge of, through the Rectum, 187
Fractures of the Femur, 365
Fungus, the Supposed Cholera, 646

Galvano-Puncture in the Treatment of Aneurism of the Ascending Aorta, 134
Gastrotomy, 189
Generation, Spontaneous, 437
Glass-Blowers, Syphilis of, 172
Glycerine, a Test for, 638
Glycogenic Function of Liver. Note from Dr. F. W. Pavy, 626
Gonorrhœa, 169
Gonorrhœa, Chlorate of Potash in, 81
Gonorrhœa, the Use of the Oil of Yellow Sandal-wood in, 84
Gonorrhœal Sciatica, 99
Goodwillie, D. H., M. D., on Anæsthetics and their Administration, 15
Gouley, J. W. S., M. D., on External Perineal Urethrotomy, 449

Hackley, C. E., M. D., on the Use of Oxygen Gas in Phthisis Pulmonalis, 597
Hæmorrhage, Concealed Intra-Uterine during Early Pregnancy, 33
Hæmoptysis, Treatment of, by the Ergot of Rye, 77
Hair-Dyes, Poisonous, 111
Hair-Dyeing, 305
Hall, Edward, M. D., Cases of Double Uterus, 586
Hemlock no Poison, 439
Hepatic Pulsations, 104
Hernia, Strangulated, in an Infant nine Weeks old, 320
Hernia, Strangulated, Operation in a Person 82 Years of age, 70
Hernia, Strangulated Ventral, Operation and Removal of two Fish Bones from the Cavity of the Abdomen, 590
Hermaphroditism, 335

PAGE

Herpes Labialis, ... 296
Herpes Zoster, ... 295, 296
Hewitt, Graily, M. D., Extract from Address of, . . 106
Hip-Joint, Amputation at, ... 72
How shall we heat our Houses? 217
Hypertrophy of one-half of the Body, ... 216

Icterus, Use of Belladonna in Infantile, ... 314
Immunity of Pigeons from the Narcotic Action of Opium, . 417
Influence of Section of the Pneumogastric Nerve on Respiration, 416
Injections, Uterine, ... 323
Insane, Popular Ignorance of the Proper Welfare and Treatment of, 443
Insanity, the Moral Treatment of, ... 209
Insects, Bites of, ... 445
Institute of Vienna, the Pathological, ... 325
Instrument for Ligature of Arteries, ... 559
Inversion of the Uterus, ... 194
Inversion of the Uterus, Extirpation, ... 102
Ipecacuanha in Dysentery, ... 546
Iron, Perchloride of, in Chilblains, ... 310
Iron, Perchloride of, in Purpura Hæmorrhagica, . . 309
Iron, Perchloride of, the Use of, in Uterine Affections, . 80
Iron, the Therapeutic Use of, ... 649

Jenner, Sir William, Extract from Address, . . . 647
Journalists, Association of American, ... 432
Journalistic Discourtesy, ... 558

Keyes, E. L., M. D., Report on Dermatology, . . . 294
Kidney, Cystic Disease of, simulating Ovarian Disease, . 193
Knee-Joint, Acute Synovitis of, ... 595
Knee-Joint, Wound of, ... 366

Labor, Rapid, Notes on a Case of, ... 198
Lambert, Walter, M. B., Acute Synovitis of Knee-Joint, . 595
Laryngismus Stridulus, the Use of Valerian in, . . . 80
Laryngoscopy without a Mirror, ... 98
Laudanum, Poisoning by, in an Infant, ... 367
Leeches, ... 653
Lente, F. D., M. D., a New Instrument for Use in Ligature of Arteries, ... 559
Liquorice-Root, Fluid Extract of, as an Excipient for Quinia, 90
Lister, Prof., his Views on Use of Carbolic Acid, . . . 152
Lobelin in Rigid Os and Perinæum, ... 89
Lung-Diseases in Children. Diagnosis, ... 317
Lusk, W. T., M. D. An Inquiry into the Pathology of Uterine Cancer, with Special Reference to Certain Symptoms, . 56

PAGE
Materia Medica, Studies in, 126
Medical Education, 221
Medicine and Mormonism, 643
Medicine, the Value of, 108
Memory, Loss of, from Syphilis, 171
Menstruation from Birth, 203
Mercury, Cholagogue Action of, 651
Milk, the Secretion of, in Infants, 440
Microscope, New Mode of preparing Objects for the 216
Modern Medicine, the Aims of, 394
Monera. A New Form of Low Animal Life, 634

Nesmith, Robert D., M. D. Aneurism of the Ascending Aorta treated by Galvano-Puncture, 134
Neuralgia, Ovarian, Treatment of, 85
Nigrismus and Albinismus, 303

O. Æ., Society of, Bellevue Hospital Medical College, 93
Obituary Notices:
  Collis, Maurice H., 448
  Dunglison, Robley, Prof., M. D., 212
  Enos, Dewitt C., M. D., 211
  Grisolle, Prof., 97
  March, Alden, Prof., 427
  Piggot, A. Snowden, M. D., 97
  Pray, Orestes M., M. D., 331
  Stevens, A. H., M. D., 210, 427
Obstetrics, Practice of, by Women, 106
Odontoid Process, Fracture of, 29
Oil and Water in the Treatment of Skin-Diseases, 307
Olive-Oil, the Therapeutic Value of, 86
Opium, Action of, upon the Uterus, 261
Opium, the Use of, in Diabetes, 547
Opium-Smoke, Therapeutic Uses of, 104
Ovarian Cyst (?), Rupture of, through the Abdominal Walls, 202
Ovarian Disease, Cystic Tumor of the Kidney simulating, 193
Ovarian Tumors cured without an Operation, 176
Ovaries and Uterus, Extirpation of, 185
Ovariotomists, Caution to, 643
Ovariotomy, 175
Oxygen, Inhalation of, in Cases of Dyspnœa, 147
Oxygen Gas, the Use of, in Phthisis Pulmonalis, 597

Palate, Surgical Treatment of Cleft of the Hard, 1
Paracentesis Pericardii. Recovery. 419

PAGE
Pavy, F. W., M. D. Criticism on Dr. Flint's Paper on the Glycogenic Function of the Liver, ... 626
Perinæum, Central Perforation of, ... 101
Pertussis, the Use of Chestnut-Leaves in, ... 90
Pertussis, Tonka Bean in, ... 86
Pertussis, Use of Valerian in, ... 80
Peters, George A., M. D. Essay on Acupressure, . . . 225
Pharmacopœia, Revision of, ... 215
Phosphorus, Antidote to, ... 654
Phthisis, Pulmonary Syphilitic, ... 172
Phthisis Pulmonalis, the Use of Oxygen Gas in, . . 597
Pneumogastric Nerve, Influence of Section of, in the Respiration, . 419
Poison of Snakes, ... 411
Poisoned Beer, ... 441
Poisoning, Criminal, ... 222
Poisonous Hair-Dyes, ... 111
Pollock, A. M.. M. D. The Wire Loop a Substitute for the Ligature, 356
Popular Ignorance of the Proper Welfare and Treatment of the Insane, ... 443
Potash, Chlorate of, in Gonorrhœa, ... 81
Potash, Nitrate of, in the Treatment of Sycosis, . . . 310
Potassa Fusa, the Use of, in Strictures, ... 170
Potassium, Bromide of, in the Sleeplessness of Infants, . . 85
Potassium, Bromide of, in the Treatment of Diarrhœal Diseases, 527
Pregnancies, Twin, ... 447
Pregnancy, a New Sign in the Diagnosis of Early, . . . 192
Pregnancy, Extra-Uterine, ... 178
Pregnancy, Tubal, ... 177, 190
Prognosis in Bright's Diseases, ... 337
Prevention of Scarlet Fever, ... 421
Prizes, ... 626, 637
PROCEEDINGS OF SOCIETIES, ... 49, 154, 269
  American Medical Association, ... 330
  Central New York Medical Association, . . . 429
  Minnesota State Medical Society, . . . 325, 535
  New Hampshire State Medical Society, . . . 537
  New York County Society, ... 369, 527
  Rensselaer County Medical Society, . . . 604
Purpura Hæmorrhagica, Cure of by the Perchloride of Iron, . 309
Pyæmia *vs.* Cubic-Space, ... 219
Pyrosis, the Use of Sulphurous Acid in, . . . 89

Quinia, Carbolate of, ... 81

Respiration, a Simple Mode of performing Artificial, in Children, . 560
Respiration, Influence of Section of the Pneumogastric Nerve on, 416

PAGE
Retroversion of an Impregnated Uterus, ... 197
Reviews and Bibliographical Notices:
- A Conspectus of the Medical Sciences, comprising Manuals of Anatomy, Physiology, Chemistry, Materia Medica, Practice of Medicine, Surgery, and Obstetrics. By Henry Hartshorne, M. D., ... 378
- A Manual of Diseases of the Skin. By T. Balmano Squire, M. B., 63
- A Practical Manual of the Treatment of Club-Foot. By Lewis A. Sayre, M. D., ... 374
- A Practical Treatise on the Diseases of Women. By T. G. Thomas, M. D., ... 63
- A Treatise on Diseases of the Eye. By J. Soelberg Wells, M. D., ... 283, 542
- A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D., ... 290
- Address on retiring from the Presidential Chair of the New York Academy of Medicine. By James Anderson, M. D., . 167
- Annual Report of the Commissioner of Agriculture for 1868, . 167
- Braithwaite's Retrospect, ... 65
- Cases in Orthopedic Surgery. By Buckminster Brown, M. D., 374
- Clinical Lectures on Diseases of the Liver, Jaundice, and Abdominal Dropsy. By Charles Murchison, M. D., . . . 62
- Clinical Lectures on Diseases of the Urinary Organs. By Sir Henry Thompson, ... 60
- Code of Health of the School of Salernum. Translated into English Verse. By John Ordronaux, M. D., . . . 393
- Descriptive Catalogue of the Pathological Museum of the Pennsylvania Hospital. By William Pepper, M. D., . . 292
- Die Addisonische Krankheit. Von Dr. H. Auerbeck. . . 390
- Diplo-Teratology. An Essay on Compound Human Monsters. By George J. Fisher, M. D., ... 624
- Joined Twins. The Obstetrical and Surgical Management. By A. B. Cook, M. D., ... 168
- Jurisprudence of Medicine. By John Ordronaux, M. D., . 392
- Les Médecines au Temps de Molière, leurs Mœurs, Institutions, Doctrines, etc. Par M. Maurice Reynaud, . . . 609
- Notes on the Alcohols from Coal-Tar (the so-called Carbolic Acid). By E. R. Squibb, M. D., ... 168
- On Chronic Bronchitis especially as connected with Gout, Emphysema, and Diseases of the Heart. By E. Headlam Greenhow, M. D., ... 278
- On Counter-Irritation. A Theory constructed by the Deductive Method. By James Ross, M. D., ... 541
- Orthopraxy; the Mechanical Treatment of Deformities, Debilities, and Deficiencies of the Human Frame. By H. H. Bigg, . 540

PAGE
On Varicose Disease of the Lower Extremities, and its Allied Disorders, Skin Discoloration, Induration, and Ulcer. By John Gay, F. R. C. S., ... 538
Pennsylvania Hospital Reports. Vol. II., . . . 281
A Practical Treatise on Perimetritis and Parametritis. By J. Matthews Duncan, ... 286
Physician's Medical Compend and Pharmaceutical Formulæ. By E. H. Hance, ... 292
Rankin's Abstract, ... 65
Researches on the Nature and Treatment of Diabetes. By F. W. Pavy, M. D., ... 380
The Ship-Captain's Medical Guide. By Harry Leach, . 166
The Structural Lesions of the Skin; their Pathology and Treatment. By Howard F. Damon, M. D., . . . 163
Venesection as one of the Means for the Arrest of Unavoidable Hæmorrhage. By C. C. F. Gay, M. D., ... 169
Rheumatism, Gonorrhœal, ... 169
Rogers, Stephen, M. D. Concealed Intra-Uterine Hæmorrhage during Early Pregnancy, ... 33
Roosa, D. B. St. John, M. D. Report of 500 Cases of Aural Disease, 497
Rupture of Ovarian (?) Cyst through the Abdominal Walls, . 202
Rupture of the Uterus, Symptoms of, in Complete, . . . 201

Sandal-wood, Oil of, in the Treatment of Gonorrhœa, . . . 84
Scabies, Diagnosis of, ... 302
Scabies, Treatment of, ... 310
Scanzoni's Views of Vaginismus, ... 181
Scarlet Fever and its Prevention, ... 421
Secretion of Milk in Infants, ... 440
Sciatica, Gonorrhœal, ... 99
Scleroderma, ... 297
Scarlet Fever, Treatment of, ... 316
Should Persons with Consumptive Tendencies marry? . . 103
Siamese Twins, ... 101
Silver, Oxide of, causing Skin Discolorization, . . . 305
Skepticism in Medicine, ... 647
Skin-Diseases, Treatment of, by Oil and Water, . . . 307
Sleeplessness of Infants, the Use of Bromide of Potassium in, . 85
Smith, Andrew H., M. D., Cases of Dyspnœa relieved by the Inhalation of Oxygen, ... 147
Snakes, Poison of, ... 411
Soda, Sulphite of, in Chronic Cystitis, ... 87
Spinal Nerves, Historical Considerations concerning the Properties of the Roots of, ... 628
Spine, Disease of, Differential Diagnosis in, ... 113

PAGE
Spontaneous Generation, ... 437
Starch Injections in Gonorrhœa, ... 169
Strictures, ... 170
Sturgis, F. R., M. D., Report on Venereal Diseases, . . 169
Sycosis, Treatment of, ... 310
Synovitis of Knee-Joint, Use of Carbolic Acid in, . . 595
Syphilis, ... 171
Syphilis, Coexistence of Gonorrhœa Chancroids, and, in the same Person, ... 172
Syphilis Hereditary, Increase of, ... 642

Taylor, C. F., M. D., Differential Diagnosis in Diseases of the Spine, 113
Temperature of the Body in Health, ... 417
The Aims of Modern Medicine, ... 394
Tonka Bean, the Use of, in Pertussis, ... 86
Trachea, Profuse Hæmorrhage from, during Operation of Tracheotomy, 109
Tracheotomy in Syphilitic Lesions of the Air-Passages, . . 104
Transfusion, Results of, ... 224
Trismus Nascentium, Treatment of, by the Local Application of Chloroform to the Spine, ... 313
Trousseau, Eulogium on, ... 447
Tubal Pregnancy, ... 177, 190
Tubercle, New Experiments on the Production of, . . 96
Tumors, Fibroid, of the Uterus, Absorption of, . . . 195
Tumors, Ovarian, cured without an Operation, . . . 176
Twin Pregnancies, ... 447
Typhoid Fever, Treatment of, ... 549, 556

Umbilical Cord, Non-Ligation of, ... 643
Umbilicus, Perforate, Case of, ... 315
Urethra, Forcible Dilatation of, ... 12
Urethrotomy, External Perineal, ... 139
Urethrotomy, External Perineal. By J. W. S. Gouley, . . 449
Urethrotomy without a Director, ... 170
Urine, Retention of, by Impaction of a Calculus in the Urethra, . 311
Uterine Affections, the Use of Perchloride of Iron in, . . 80
Uterus and Ovaries, Extirpation of, ... 185
Uterus, Double, Cases of, ... 586
Uterus, Absorption of Fibroid Tumors of, ... 195
Uterus, Extirpation of an Inverted, ... 102
Uterus, Inversion of, ... 194, 205
Uterus, Partial Recurrent Inversion of, ... 185
Uterus, Retroversion of an Impregnaited 197
Uterus, Rupture of, . . . 182, 188, 189, 201, 205, 207
Uterus, Symptoms of Incomplete Rupture of, . . . 201
Uterus, the Action of Opium upon, ... 261

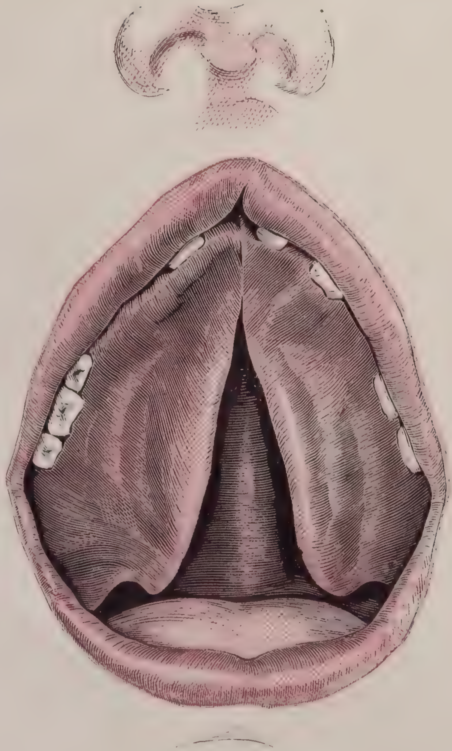
PAGE
Vaccination in the Prussian Army, 110
Vagina, Rupture of, 188
Vagina, Spontaneous Laceration of, 203
Vaginismus, 181
Valerian in the Treatment of Pertussis and Laryngismus Stridulus, 80
Venereal Diseases, Report on, 169
Vesical Absorption, 223
Vienna Pathological Institute, 325

Watson, Sir Thomas, M. D., Extract from Address of, 108
Weight of the Brain, 446
Wheelock, A. T., M. D. On Fractures of the Femur, 365
Whitehead, W. R., M. D. Operation for Strangulated Ventral Hernia, 59
Whitehead, Wm. R., M. D. Surgical Treatment of Cleft of the Hard Palate, with an Illustrative Case, 1
Wire Loop, The, a Substitute for the Ligature, 356
Woodward, A. T., M. D. Note on Uterine Injections, 323
Wragg, W. T., M. D. Report on Epidemic of Yellow Fever, at Wilmington, N. C., in 1862, 478

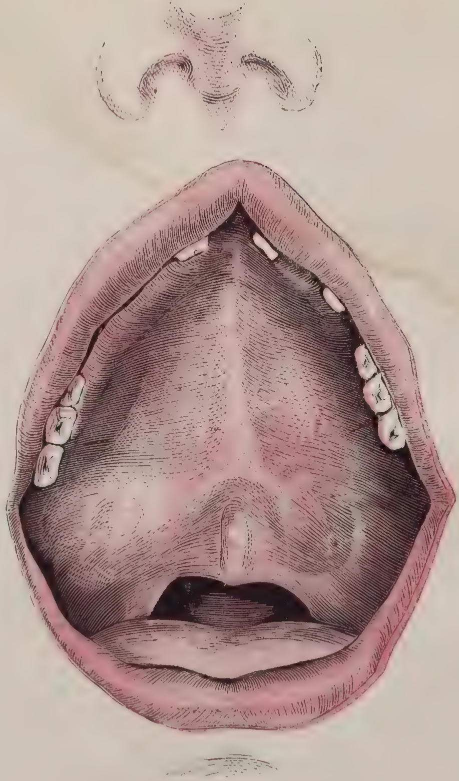
Yellow Fever at Wilmington, N. C., in 1862, 478

Zinc, Lactate of, in Epilepsy, 77
Zinc, Oxide of, as a Therapeutic Agent, 87
    Bismuth, some of the Uses of, 88

DR. WHITEHEAD'S CASE OF CLEFT PALATE.



Before the Operation.



After the Operation.

NEW YORK

MEDICAL JOURNAL:

A MONTHLY RECORD OF

MEDICINE AND THE COLLATERAL SCIENCES.

Vol. IX.] APRIL, 1869. [No. 1.

Original Communications.

Art. I.—*Surgical Treatment of Cleft of the Hard Palate, with an Illustrative Case.*[1] By Wm. R. Whitehead, M. D., New York.

Cleft of the hard palate has been regarded by most surgeons as beyond the resources of surgical intervention; and though numerous attempts have been made to establish the operation for this infirmity as a feasible and desirable procedure, yet not until within a few years has this much-desired object been attained.

In 1816, Græfe, of Berlin, was the first to attempt the operation for cleft of the soft palate, but was unsuccessful, and three years later Roux gave a brilliant *éclat* to the operation known as staphylorrhaphy, by the happy success which attended his essay on the person of Dr. Stephenson, who read the report of his own case before the French Academy of

---

[1] This paper was read at a meeting of the New York Medical Journal Association, February 19, 1869.

Medicine, thus signally attesting the advantages of this triumph of French surgery. Staphylorrhaphy then came in vogue with aspiring surgeons; its difficulties were more or less successfully met by ingeniously-devised instruments. It had its glories and its defeats, the former being due to the more or less propitious circumstances which attended and succeeded its exact and skilful performance; and in this respect staphylorrhaphy, like some other deservedly well-established operations, has its serious disadvantages. After the first ardor, which its novelty had excited, somewhat abated, numerous objections were urged against it, and this operation declined in the favor of many. The operations for cleft of the hard palate shared a worse fate; and though Roux, Kreimer, J. Mason Warren, Pollock, and some others, met with a certain encouragement, yet the opinions of most medical men regarding operations for the closure of congenital or acquired defects of the hard palate have been strongly marked with dissent; and at the present time the mechanical devices of the dentist are preferred to all operations for cleft palate of every description, by those who are unacquainted with the progress which has been made in this part of surgery. Heretofore there has been just reason to accept gladly any mechanical means, however imperfect, to supply the place of a confessedly tedious and long operation such as staphylorrhaphy. The emulous attempts of surgeons, to close, by operation, defects of the palatine vault, have met with but little encouragement, and this quite independent of a few, and I am happy to say only a few, who like to oppose any innovation which they imagine departs from their fixed and sometimes mistaken convictions, of which they appear more tenacious as they increase in years.

Gentlemen, I ask your indulgent attention to what I have to say about a German operation, and I believe I am the first who has endeavored to introduce it in this country. Many of you, I have no doubt, are familiar with Pollock's successful cases of cleft of the hard palate, and possibly some of you are acquainted with the attempts of Baizeau at restoration of acquired defects of the palatine vault. I shall not detain you with a consideration of the old modes of operating for cleft of the hard palate. It affords me pleasure, however, to remind you that to our honored and lamented countryman, J. Mason Warren, whose signal services in American surgery are respected at home, and widely esteemed abroad, is due one of the most remarkable and singularly successful efforts at closure of an extensive cleft of the hard palate. The direction and extent of the incisions in this case, as subsequently were those used by Pollock, resembled very much those adopted in the German method. But what particularly distinguishes this method is the inclusion of the periosteum within the flaps, with a view to the reproduction of bone. As you are well aware, the subject of the reproduction of bone from the periosteum has been well studied practically in our own city. The comparatively recent publication of the extensive works of Ollier and Sédillot has added fresh and much-increased interest to this suggestive subject. The experiments of Flourens on the periosteum of animals were not lost to science, and some desirable applications to surgery have attested the value of those experiments. Never are we more forcibly reminded of the fortuitous distribution, by the winds, of different seeds falling on barren and fertile places, than in considering the accidental distribution of isolated scientific facts, which often seem of no use until beautifully developed by some fertile intellect. To Langenbeck we are indebted for an eminently useful application of the principles which Flourens had enunciated; to this Prussian surgeon is due a very successful operation which, while it includes the periosteum in the flaps, with a view to the ultimate reproduction of bone to close the fissured vault, preserves the nutrient vessels uninjured, and thus contributes to success, by the avoidance of gangrene and sloughing of the flaps.

Thus far I have had but a very limited experience with this desirable operation, but I shall request presently to show you one of my cases which was recently operated on, and beg to call your attention to the one reported in the July number of the *American Journal of the Medical Sciences* for 1868, and which some of you saw at the meeting of this Association about a year ago, but before Langenbeck's method was essayed. I regret that the lady manifests some reluctance to appear here this evening, otherwise you would have an opportunity of seeing the very satisfactory result which has been obtained.

There is another case which has been operated on by me, an acquired defect of the hard palate, and which appeared to be a most favorable case for operation. In this case I signally failed, and I exhibit to you a plaster cast of it taken by a dentist for me before the operation. My failure was due principally to an exceedingly profuse suppuration; though I shall not attempt to exonerate myself entirely from the neglect to observe one or two little precautions in the performance of the operation, and which I have since learned to value more highly. Also I am more thoroughly impressed with the importance of an entire eradication of the constitutional disease which sometimes causes the defect, before attempting an operation. In a case which came under my care a few days ago, caused by syphilis, I expect to assure myself as well as possible, by months of attentive observation, of the elimination of all constitutional taint before I operate. I propose this evening to give you only a general description of this new method of operating for cleft of the hard palate, and for more ample details I beg to refer you to an extended paper by me on this subject, in the October number of the *American Journal* for 1868. I shall not presume to repeat here verbatim that which is quite accessible to all of you who may desire to consult this article at your convenience; but I shall request permission to refer, if necessary, to the woodcuts contained in it. I think that there can be fairly claimed for this operation advantages which entitle it to a prominent place in the list of useful operations. While I am quite sensible to the objections, some of which may with reason be urged against it, yet the undeniable advantages in its favor may justly claim your attention. In giving a brief history of the case which I offer for your inspection this evening, I shall endeavor to embody in it the most important points necessary to a comprehension of this operation, designated by the somewhat dissonant term, muco-periosteal uranoplasty. But previously I request your attention to the peculiar distribution of the arteries which supply the roof of the mouth. The descending or superior palatine artery, as you know, before emerging from the palatine canal, gives off a few small branches, which pass down the small accessory palatine canals, and are distributed to the muscles of the soft palate and mucous membrane. The superior palatine, in its horizontal portion, runs along in a groove at the junction of the horizontal plates of the maxilla and palate-bones with the alveolar process (see Fig. 1). Anteriorly this artery passes through the anterior palatine canal upward to anastomose with the one on the opposite side and the artery of the septum nasi. The horizontal portion of the superior palatine is of considerable size, and is included in the periosteal flaps when they are detached from the bone. But these flaps remain adherent at their three nutrient points which correspond to the orifices of the spheno-palatine canals and the anterior palatine canal. The superior palatine is of considerable size, and if cut may occasion troublesome hæmorrhage. But this accident can be readily avoided by carefully detaching the periosteum with a blunt periosteal elevator. There is a little branch of the ascending palatine which, after passing between the tendons of the levator and tensor-palati muscles, is in relation with the inner border and posterior surface of the tensor-palati muscle, and the knife, in dividing this muscle during the operation to relax the velum palati, cuts this little branch, and nearly always causes some bleeding, but which, however, can be conveniently checked with ice-water spray thrown on the part.

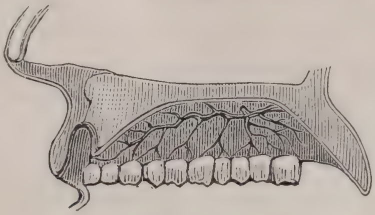


FIG. 1.

There are numerous differences in the form, extent, and general appearance of cleft palates. They are very naturally divided into those which are congenital, and those which are the consequence of disease, as syphilis or scrofula, or of accident, the result of gunshot wounds of the mouth. After operations on the palatine vault, as in the removal of tumors of this region, or after resection of the upper jaw, the surgeon may be called upon to close, by operation, defects of the hard palate. The congenital defects are more or less familiar to you all. Most usually, the cleft does not extend beyond the middle of the horizontal plates of the maxillæ. Very often the fissure is complete, and there is separation of the alveolar process in front; sometimes with a disfiguring projection of the intermaxillary bones. Occasionally there is a double cleft of the hard palate, complicated or not with double or single hare-lip. Exceptionally, there is seen a congenital defect of the hard palate only, and the soft palate is not split. Usually, however, whenever there is cleft of the former, there is complete separation of the velum. The cleft is quite often median—that is, occupying the middle of the vault; but, very frequently, it is more to the left. There are infinite varieties and degrees of this infirmity; but the operation, as applied to one of the not infrequent forms of cleft of the hard palate—such as that to which I now ask your attention—will suffice to illustrate the main features of the operation. But, on account of the very incomplete development of the lateral halves of the cleft velum in this case, the improvement in speech will necessarily be less marked than it would be were that development more considerable. But I do not wish to anticipate now what I have to say to you concerning the influence of this operation on the speech; and this is a point which should, and I feel confident will, engage your attention, as being one of the most attractive features of this German method.

Case.—Maria D., aet. 7, had a complete cleft of both the hard and soft palate. The cleft originally extended through the alveolar process in front, and was complicated with hare-lip, which last had been operated upon before I saw her, leaving an ugly-looking notch, which, however, can be readily closed. The cleft was five-eighths of an inch posteriorly, and gradually diminished toward the front at the alveolar process (see colored plate). The deformity, as it appeared before the operation, is well exhibited by a plaster cast of the roof of the mouth, taken by a dentist previous to the operation, and which I offer for your examination.

On the 16th of last December, I closed the whole of the cleft by suture, most efficiently assisted by Drs. Louis Elsberg, F. A. Burrall, Octavius White, and Dr. Robert Newman. This last gentleman kindly administered ether. The operation was long and tedious, and required considerable patience.

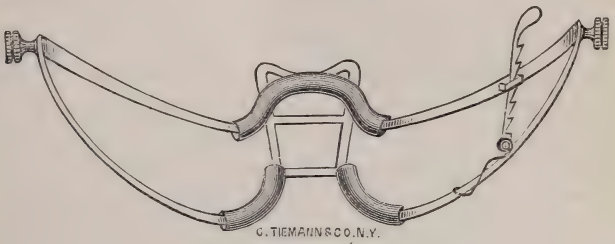


FIG. 2.

This stout wire gag (see Fig. 2), which I hold in my hand, was used to keep the mouth open during the operation. I think that this instrument is very well suited to many operations on the mouth, and has been much improved by the addition of a tongue-depresser. The patient was placed on a sofa opposite a window, but the light was so dim that afterward artificial illumination was used.

After the administration of ether, the palato-pharyngeus, palato-glossus, and levator-palati muscles were severed, and the operation continued; but not until after the loss of considerable time from vomiting by the patient. There was also some delay occasioned in arresting the bleeding, and in washing out the throat with a spray apparatus.

The point of a sharp knife, curved on its surface (see Fig. 3), was passed around and behind the hamular process, and over the lower part of the internal pterygoid plate, so as to cut loose the mucous membrane which confined each lateral half of the velum to this part.

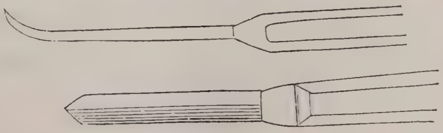


FIG. 3.

If there had been a very perceptible ledge of bone, formed by the horizontal process of the palate-bone, it would have been necessary, as Langenbeck recommends, to detach the mucous membrane from the posterior border of this vestige of the palate-bone; and this is a very important precaution, as otherwise the flaps will not fall together as they should after other stages of the operation are completed. This was the most difficult and tedious part of the operation, and is generally so considered. An incision was next made along the edges of the cleft. It is proper here to remark that, if there be a ledge of bone, this incision should run along its edge, being careful, in every case, to keep at least an eighth of an inch beyond the groove in which courses the superior palatine artery. This incision should be made to the bone, and run along on its surface.

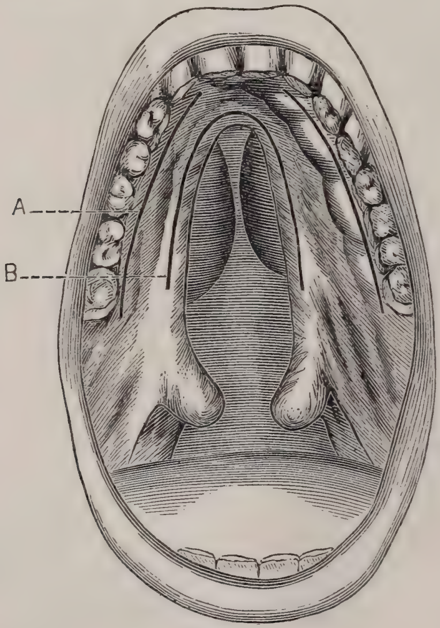


FIG. 4.

Other cuts were next made, one on each side, which extended from about the eye-teeth to slightly beyond the last molars, and along the border of the gum (see A and B, Fig. 4, copied from Langenbeck). These cuts were made through the periosteum and to the bone.

Such extensive cuts may not always be necessary, and *interrupted side-cuts* have sometimes been preferred. For detaching the periosteum, I made use of an instrument like this (see Fig. 5)—

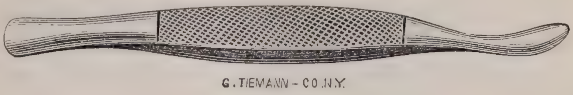


FIG. 5.

which Dr. Sayre facetiously calls his oyster-knife, and which he uses most advantageously in detaching the periosteum in operations on the hip-joint.

Gentlemen, this instrument is far superior for this purpose to any periosteal elevator that I have seen, and much more handily used than that of Langenbeck, which I here exhibit:

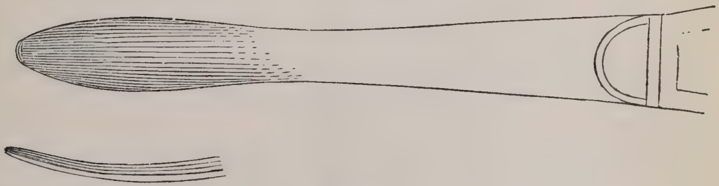


FIG. 6.

In detaching the periosteum, the nutrient parts of the flaps, to which I have alluded, were carefully respected; and, after this stage of the operation was completed, the flaps almost met in the middle line. The paring of the edges was next done, and the passage of the sutures, seven or eight in number, was readily accomplished by means of this suture-needle—

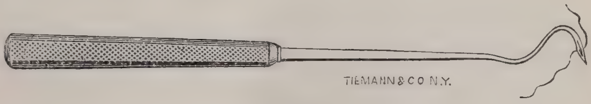


FIG. 7.

which I claim to be better than that used by Langenbeck or others in this operation. A silver-wire canulated needle was essayed in this case for making one suture, as on a previous occasion; but I prefer the needle which I have shown you, as being more simple.

Some of the wires were twisted, and some of them were tied, as Sims's instrument, which I had made use of for adjusting the wires, had become misplaced, and could not be found until after the operation.

Bits of cotton were stuffed in the side-cuts, to keep them from healing too soon, and, also, by the pressure which they exerted on the sides of the flaps, to extend the line of union.

The hæmorrhage was quite abundant for a few minutes, but was readily controlled by means of ice-water spray. This bleeding came from the little branch of the ascending palatine artery, when I divided the levator-palati muscle. The bleeding which occurred in detaching the periosteum was very inconsiderable, as this membrane was torn off with the blunt edge of an elevator. In this respect the detaching of the periosteum in this manner guards against the hæmorrhage, which was formerly the accompaniment of *mucous* uranoplasty. On one occasion, my first uranoplastic operation, I cut the superior palatine artery, but controlled the hæmorrhage, without much trouble, by compression and the use of styptics.

Langenbeck states that, "in 14 cases in which mucous uranoplasty was done, there were six cases of dangerous secondary hæmorrhage; whereas, in 25 cases in which the periosteum was detached, there was no after-bleeding."

The patient was put to bed, and some strong beef-tea and other liquid food, as milk, ordered, as her only nourishment for ten days. There was no sloughing or profuse suppuration following this operation. Spray containing carbolic acid was thrown twice a day into the side-cuts, into the throat, and through each nostril into the nose; great care was taken not to project the spray on the line of union. The cotton plugs were removed several times, and fresh ones saturated with glycerine put in their places. In the left side-cut some of the cotton remained much longer than I intended, and was not discovered until all the sutures were removed. Most of the sutures were taken out about the 14th day, and the last ones remained until the 18th. The union was found complete all the way through (see colored plate); and the parts at present feel as if solid bone will ultimately be formed. This point, however, I prefer to test a little later with a needle.

For making the side-cuts, I used a knife like this:

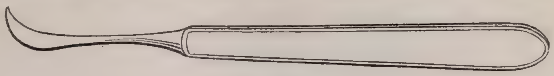


Fig. 8.

and for dividing the pillars of the fauces a sickle-shaped knife like this:

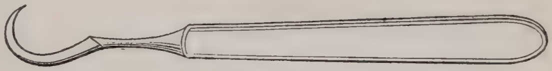


Fig. 9.

There is a brief analysis of 55 cases compiled by me and published in the *American Journal.* This analysis I have since reduced to a tabular form, which is prepared with some care, but I will not tax your attention by reading that which may seem unnecessary.

I shall content myself, therefore, with a short recapitulation of the most salient points of this analysis, and especially allude to those which I am sure will appear of most interest. Of these 55 cases collated by me, though they are far from representing the actual number of cases operated on, 47 of them were congenital defects. The remaining 8 cases were acquired deficiencies of the hard palate. Most of these operations were performed by Langenbeck and by Simon. I shall allude first to the cases of congenital cleft palate. Of these, there were, of the 47 cases mentioned, 35 in which there was in each a complete cleft of both hard and soft palate. In 3 of these there was a double hare-lip—in 2 a single hare-lip—and in 5 a double cleft of the vault, one of which five cases was complicated with a double hare-lip.

There were 10 cases in which there was an incomplete cleft of the hard, and a complete cleft of the soft palate. In one case there was no mention made of the nature of the defect, and the remaining case was one of partial cleft of the hard palate without separation of the soft palate.

At first, and in some of the cases operated by Langenbeck, staphylorrhaphy was performed before uranoplasty; in fact, in 13 of the 47 cases, staphylorrhaphy preceded uranoplasty.

In 5, uranoplasty was done first, and in 24 cases uranoplasty and staphylorrhaphy were performed at one operation. In 5 cases uranoplasty alone was done. Silver sutures were used in only a few of the cases.

There were 33 cases of complete cure—9 cases in which the cure was incomplete, and 5 complete failures, one of them a death in a child 2 years old, from septicæmia on the 10th day, and operated on by Simon. But this is the only death ever attributed to the operation. In 4 of the 5 cases operated on by Beck, there was more or less marked improvement in speech, and in his 5th case, which was a very incomplete cure, we are led to infer that there was none. In two of his cases, he speaks of the nasal tone persisting. The three cases operated on by Billroth were on children. Two of these cases were failures, one of them an infant eight weeks old. The case which succeeded was of a child 28 weeks old; but nothing is said of the subsequent effects of the operation on the speech. Of 21 cases by Langenbeck, of which I have made an abstract, one was a failure, and there were 4 cases in which the cure was incomplete. Of the 16 cases out of 21 in which the cure is reported by him as complete, or nearly so, there are 5 cases in which he does not allude to the speech; in one of them, a woman 22 years of age, there was a good formation of bone. In another, a lad 9 years old, there was a very fine form of the vault obtained, but no new osseous formation. The three remaining of these five cases were youths of the ages of 9, 15, and 18. In 11 out of these 16 cases cured by Langenbeck, there was more or less marked improvement in speech. In some, the speech, which was unintelligible before the operation, became intelligible and continued to improve. In some the improvement in speech was only slight, in others the speech became perfectly distinct. In a single case operated on in France, by Sédillot, on a child 3 years of age, there is nothing said about the speech; but the only object of this operator seems to have been to disprove that the periosteum alone can in this locality or elsewhere reproduce bone. In the 15 cases of congenital cleft of both the hard and soft palate operated on by Simon, the speech in 4 of them is reported by him as nasal and hard to understand. In 6 of the remaining 11 cases the speech was improved and made intelligible, but it remained more or less nasal. In the other 5 cases there were two of them in which uranoplasty alone was done, and the speech was not improved; in the other 3 cases either the hard or soft palate reopened or failed to unite, and the speech was about the same as before the operation. In the case of my patient mentioned in the analysis, the speech, which before the operation was unintelligible, afterward became distinct and intelligible, but the nasal tone still persists.

We come now to acquired defects of the hard palate, the result of disease or wounds; and, of the 8 cases cited in my analysis, nearly all of them were attended with immediate restoration of normal speech. In order to examine thoroughly the advantages and disadvantages of this operation on the speech, it is proper to consider the influence of the velum palati on the modulation of the voice. Simon has most thoroughly studied this subject, and critically examined it. The persistence of the nasal tone, to which he has pointedly called attention, would seem somewhat to impair the usefulness of the operation when applied to cleft of the hard palate, involving a separation of the velum. There can be no doubt, that when the cleft is very considerable, and the two halves of the bifid velum are exceedingly small and undeveloped, there is not enough tissue out of which to construct a movable and serviceable soft palate, which shall even moderately well supply the offices of a normally-developed velum.

The movements of the velum during speech cause the buccal and nasal cavities to communicate, or to be occluded from each other. When a complete occlusion cannot be effected, as in cleft palate, or from any other cause, such as the paralysis of the palatine muscles, temporarily resulting from diphtheria, more or less nasal tone must be the consequence. It is necessary, however, that a certain degree of nasal tone should occur in the pronunciation of certain words, in order to constitute purity of speech. If a nasal tone accompanies the pronunciation of nearly every word, as is sometimes even strikingly observed in persons who are not affected with cleft palate, the speech may be much marred; and, should it be characterized by an indistinct, harsh, and guttural articulation, I can conceive of nothing more displeasing to a person whose hearing has been cultivated to harmonious sounds. We know, however, that some persons who have a marked nasal accent have, nevertheless, a remarkably clear and distinct articulation. This is more perceptible in the French language than in our own.

Whenever cleft of the hard palate is accompanied with a wide separation of the velum, and when this last is not much developed, distinctness of speech may be obtained by the combined operations of uranoplasty and staphylorrhaphy, but the nasal tone will always persist, because the newly-formed palate will be too short, and the united velum too tense to permit at will the occlusion of the nasal from the buccal cavities. But distinctness of speech is a most desirable object to a person with cleft palate, whose articulation is unintelligible. Moreover, the most skillfully-devised mechanisms, of which I know none better than that of Kingsley, will not replace the permanent benefit which the operation of periosteal uranoplasty may afford to cleft of the hard palate.

Though this operation may be somewhat irksome to both the operator and patient, it is attended with very little danger to the latter.

The flowing downward into the throat and stomach of the nasal secretions is prevented afterward; and this is no inconsiderable advantage to those who are afflicted with such a repulsive infirmity as an extensive cleft of the hard palate. An obturator, with a soft-rubber velum properly adjusted to it, may admit of temporary advantages, but, like some other mechanisms, it is only a make-shift, and is liable to become disarranged. It needs repairs, and requires frequent cleansing.

Obturators, in order to fit accurately, must be adjusted to the increasing size of each young patient's mouth, and every six months a new obturator may be needed. They are often sources of irritation; they wear the teeth to which they are sometimes attached, and frequently oppose the spontaneous closure or lessening of small perforations of the palate. These devices may be swallowed; in fact, in one instance death was the consequence of asphyxia from this cause. They are in some respects much like some of the artificial limbs which promise much and are at first very attractive both to the patient and to the surgeon; but these artistic wooden legs are after a while thrown aside to give place to crutches, or are availed of only on grand occasions, being designed more for show than for use.

Obturators, however, have their uses, and may sometimes advantageously replace the operation of muco-periosteal uranoplasty.

Art. II.—*Anæsthetics and their Administration.*[1] By D. H. Goodwillie, M. D., D. D. S., New York.

It has been well said that "the discovery of anæsthesia, like many others in science and art, was the result of long-continued and patient effort made by many persons—not by accident, but carried on for years with the definite end in view, which was afterward attained.

"This discovery was thankfully received by suffering humanity; but by the surgeon, particularly, it received a hearty welcome, as his operations were aided, his usefulness extended, and his feelings of humanity spared.

"Although there were shadows that seemed to darken the lustre of this discovery, yet it only appeared to stimulate inquiry, and the result has been a better acquaintance with the agents employed, clearer views of the sources of danger, and more certain rules for safety in their demonstrations."

The Egyptians used many drugs to relieve pain, or assuage grief—to produce intoxication or ecstasy. In the time of the Roman empire, means were employed to mitigate pain in surgical operations.

Pliny and Dioscorides described some medicament for relief of pain. The Chinese surgeons and ancient Scythians inhaled narcotic vapors. The Indians threw tobacco on their camp-fires, to put them in a state of ecstasy.

Even among civilized nations such were used. The priestesses at Delphi became intoxicated by the fumes of narcotic plants before delivering the oracles. May this not have been the germ from which has sprung surgical anæsthesia? Albertus Magnus (thirteenth century) probably knew something of the use of ether as an anæsthetic, for he gives a recipe for its preparation. In the sixteenth century, Porta, of Naples, mentions a soporific medicine.

---

[1] Read before the New York Medical Journal Association, Jan. 15, 1869.

The anæsthetic effect of nitrous oxide was suggested by Sir Humphrey Davy, in 1776, as seen by the following extract from his work: "As nitrous oxide in its extensive operations appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place." This idea of Davy's found a practical demonstrator in the person of Dr. Horace Wells, to whom, without doubt, belongs that honor. The successful trial of surgical anæsthesia occurred several years before Jackson proposed, or Morton used, ether. That the brain of Horace Wells was the modern source and origin of anæsthesia has been fully established.

An anæsthetic is a substance capable of abolishing the function of sensation. True anæsthetics are local anæsthetics, because capable of depriving it of sensation only. In general anæsthetics there is loss of motion, perception, thought, consciousness, etc.

List of Anæsthetics.

NAME.	SYMBOL.	PROPERTIES.	BOILING POINT. Fahr.	GAS OR VAPOR. Density. H=i.
Nitrous oxide gas	NO.	Supports combustion		22
Carbonic oxide gas	CO.	Burns in oxygen		14
Carbonic acid gas	CO_2	Prevents combustion		22
Light carburetted hydrogen gas Hydrate of methyl or marsh gas	CH_4.	Burns in air		8
Methylic alcohol	CH_4O	Vapor burns in air	151	16
Methylic ether gas	$(CH_3)_2O$	Burns in air		23
Chloride of methyl gas	CH_3Cl	do.		25.25
Bichloride of methylene	CH_2Cl_2	do.	88	42.5
Terchloride of formyl (chloroform)	C_2HCl_3	Vapor extinguishes flame	142	59.75
Tetrachloride of carbon	CCl_4	do.	172	77
Heavy carburetted hydrogen gas Olefiant gas or ethylene	C_2H_4	Burns in air		14
Ethylic alcohol (absolute alcohol)	C_2H_6O	Vapor burns in air	172	23
Ethylic ether (oxide of ethyl, sulphuric ether)	C_4H_5O	do.	96	
Chloride of ethyl	C_2H_5Cl	do.	52	32.25
Bichloride of ethylene (Dutch liquid)	$C_2H_4Cl_2$	do.	175	49.5
Ametic alcohol (fusil oil)	$C_5H_{12}O$	do.	270	44
Hydride of amyl	C_5H_{12}	do.	86	36
Amylene	C_5H_{10}	do.	90	35
Hydrate of caproyl (light pet. spirit)	C_6H_{14}	do.	154	43
Benzol	C_6H_6	do.	180	39
Turpentine spirit	$C_{10}H_{16}$		320	68

COMPOUND ANÆSTHETICS.

Chloride of methyl in ether—Chloride of methyl in chloroform.

Among the many anæsthetics, I propose to take up only those in general use, viz.: chloroform, ether, bichloride of methylene, and tetrachloride of carbon.

CHEMISTRY OF CHLOROFORM.

It is a colorless liquid. Aromatic and penetrating smell—taste sweetish—sp. gr. 1.491, chem. formula $C_2 HCl_3$ or 12 parts carbon, 1 part hydrogen, 105 parts chlorine. It is made by the distillation of rectified spirits with water and chloride of lime—the addition of quicklime renders the product more abundant and pure. It should be purified by washing with water, then shaken with a solution of carbonate of soda, and then redistilled.

The adulterations of chloroform are:

I. Alcohol or ether, which reduces its strength.
II. Methyl compounds.
III. Products of decomposition.

A ready test for alcohol is to drop some chloroform in distilled water. If pure, the globules of chloroform will sink to the bottom and preserve their transparency; if alcohol be present, they will have a milky appearance. The test for ether is the same as alcohol, or by the smell.

Test for methyl compounds is strong sulphuric acid; becomes black when mixed with chloroform. Time, air, and light, produce a variety of changes in chloroform by the formation of certain hydrochloro-carbons, hydrochloric acid, and free chlorine. Free chlorine may be detected by adding a little chloroform to distilled water, and then add a solution of nitrate of silver; if chlorine is present, a white precipitate will be formed.

Chloroform evaporates at all temperatures. Air at 40° Fahr. can retain 6 per cent. of chloroform vapor. At 60° Fahr. 12 per cent. This fact ought not to be forgotten in the administration.

CHEMISTRY OF ETHER.

Ether, chemical formula C_4H_5O, or by weight, 24 parts carbon, 5 parts hydrogen, and 8 parts oxygen.

Prepared by distilling equal parts of alcohol and sulphuric acid. A colorless and limpid liquid, of peculiar odor and hot taste, specific gravity, at 60° Fahr., .720, boils at 96° Fahr. With oxygen or atmospheric air it forms an explosive mixture, and, kept in contact with air, produces acetic acid. Dissolves in alcohol in all proportions, and is often diluted with it; purified by water, which unites with it. Chloroform compared with ether is much more powerful.

Dr. E. R. Squibb gives the following tests for ether: Half fluid ounce of the stronger ether, evaporated spontaneously from a breakfast-plate, should give, as the last portions pass off, only a faint aromatic odor of light oil of wine, and should leave an odorless, tasteless residue upon the surface of the plate. When shaken in a test-tube with an equal volume of water, it should lose ten per cent. of its volume. In a test-tube half filled and grasped in the hand for a short time, it should boil actively upon the addition of small fragments of broken glass.

CHARACTER OF BICHLORIDE OF METHYLENE. (CH_2Cl_2)

(By weight, C. 6 parts, $H_2Cl.$, 70.)

1. It is an effective general anæsthetic, producing as deep insensibility as chloroform.

2. In action it is rather more rapid than chloroform, but, to develop effects, more of it is required, in the proportion of six parts to four.

3. It produces in the second degree, less prolonged narcotism than other anæsthetics.

4. When effects are developed fully, the narcotism is very prolonged.

5. Its influence on the nervous centres is uniform, and it creates little, if any disturbance, or break of action between the respiration and circulating functions.

6. Its final escape from the organism is rapid; symptoms of recovery are sudden.

7. In some cases it produces vomiting.

8. When it kills, it destroys by equally paralyzing the respiring and circulating functions.

9. It interferes less with the muscular irritability than perhaps any other anæsthetics.

10. It combines with ether and chloroform in all proportions.

I have used this agent several times, and find that it accords with the above character, and trust it may always prove so.

It will be seen that the only difference between the bichloride of methylene and chloroform is, that it has one atom more of hydrogen, and one less of chlorine and carbon.

TETRACHLORIDE OF CARBON. (CCl_4)

(By weight, 6 parts C. and 140 Cl.)

It has a pleasant odor, somewhat resembling that of quinces.

Anæsthesia is rapidly produced by it, and easily sustained with or without entire loss of consciousness, and the effects pass off very quickly.

Not usually any excitement or struggling before anæsthesia supervenes, or followed by any sickness.

It possesses a great point of interest in immediately allaying pain from any cause, headache, dysmenorrhæa, suffering, etc. It is said to be valuable in inducing quiet and refreshing sleep.

In midwifery it removes pain without necessarily destroying consciousness, or interfering apparently with the expulsive efforts of labor.

Having had but little experience with this agent as an anæsthetic, I cannot therefore pass judgment on it. I am not, however, thus far very strongly biassed in its favor.

The effects of inhalation of these anæsthetics are both local and general. On a sensitive surface it acts as a caustic. The irritation of the air-passages is due to this fact; thus we have the spasm manifested by coughing, etc. When the narcotic effect is produced, the spasm is controlled. Irritation is changed for partial paralysis.

The physiological action of these anæsthetics is to produce I. A stimulus—an excitation of the functions. II. A suppression—a retardation of the functions. Small quantities, diluted with air, prolong the former—large quantities suddenly collapse the functions. The power over muscular motion is unequal, but abrogation of sensation is common to all. The mental processes are less affected by nitrous oxide.

Circumstances modify the action these agents may have upon the system. Diffusibility, volatility, solubility, all influence their effects.

While water can hold in solution one ninth of its weight of ether, it dissolves only $\frac{1}{280}$ of chloroform.

We see from this that the quantity *inhaled* is *not* the quantity *absorbed.* All these agents act by absorption into the blood, whether taken into the lungs or stomach, or injected under the skin. Here, let me remark, is opened up a wide field of research. Gases (N. O., for instance) are readily absorbed and easily eliminated. Vapors are much less so. Elimination is accomplished in less time, if the anæsthetic agent is taken into the lungs, than in any other way, as the blood is not so heavily loaded.

When a quantity of vapor or gas is breathed, it is brought into contact with six hundred millions of air-cells of the human lungs, the superficial extent of which, as estimated by Linderman, is not less than 2,642 square feet. In inducing anæsthesia, fifteen or twenty cubic inches of the anæsthetic mixture, fifty or sixty times over, are brought into contact with this surface, and manifest their effects by direct action on the central parts of the nervous system, through the medium of the blood; or they may act on the blood, modifying that interchange of elements necessary to perfect health; or, in other words, that narcosis is suspension of oxygenation.

ACTION OF ANÆSTHETICS ON THE BLOOD.

Ether gives the blood a dark-blue color, prevents rearterialization, and dissolves the blood-corpuscles, setting free their hematin.

Chloroform turns the blood a brilliant scarlet color; does not dissolve the blood-corpuscles, as ether, but destroys a greater number of them, setting free the hematin and crystallizing it.

Dr. Geo. Harley says: "The common property of all narcotics and anæsthetics is to diminish the energy of interchange between the constituents of the air on the one hand and the blood on the other."

Causes of difference in color of blood are due less to change of composition than to change of form. Distending the corpuscles darkens the blood, making them more convex; when concave, it brightens the blood.

The first general effects on the organism, of the anæsthetics, when inhaled, are stimulant. As soon as the narcotic effect begins, the senses become affected; and, about the time sensation is lost, there occurs a muscular tremor. This indicates the severance from the central nervous power; the muscles, which are now left to their own individual influences—heat, electricity, etc.—begin to relax from a want of coördinating power. Coördination, being a compound of sensation and motion, is perfect only when the nerve-fibres are in equal degree capable of transmitting impressions from the centres.

When muscular tremor subsides, the patient is in a state of complete insensibility, having the appearance of sleep: the pupil of the eye somewhat contracted; pulse beating rather slow; the breathing regular; begins to snore a little.

There is now a very delicate balance in the organism, in this state of induced anæsthesia. Dr. Sansom says of it: "On the one side, is Being robbed of many of its attributes; on the other side, is Death. Compensating oxygenation maintains the one, while insufficient oxygenation induces the other."

Dr. Sansom divides narcotism into three stages, viz.: 1. Perversion of consciousness; 2. Abolition of consciousness; 3. Muscular relaxation. Or, in other words: 1. Sopor; 2. Stupor; 3. Stertor.

Narcotism is suspended oxygenation. Whatever produces, to a certain extent, insufficient aëration of the blood, produces narcosis, and *vice versa*.

To produce anæsthesia, the following causes combine, viz.: 1. Preventing oxygenation; 2. Diminishing arterial supply; 3. Sluggishness of flow in the capillaries; 4. Subdual of energy of the nerve-filaments distributed to the lungs; 5. Shallowness of respiration, contributing to prevent free entrance of air into the blood.

I give here the views of Dr. Anstie, as the most rational, and supported by facts, as to the mode of death by chloroform:

"I believe death to take place in two ways, depending on the rapidity of absorption of the vapor. When the impregnation of the blood takes place with moderate rapidity, the sympathetic nervous system is the ultimum moriens, and death begins at the lungs. When, on the contrary, the circulation becomes very rapidly charged with a large proportion of chloroform, the narcotic effect may fall with such force upon the sympathetic nerves as to extinguish their vitality at once.

"From the fact that, in an immense majority of reported fatal cases, the symptom of danger was confessedly the failure of the pulse and the blanching of the countenance, the conclusion appears strongly indicated that paralysis of the heart is *the* source of danger in surgical chloroform narcosis."

Death by shock is spoken of by a writer of an article in the *American Journal of Medical Sciences:*

"The fatal impression being a sudden influence upon the branches of the par-vagum in the lungs, produced by the inhalation of undiluted vapor of choloroform during the administration. That sudden impressions on the peripheral extremities of nerves produce a profound effect upon the internal and vital organs, is one of the best-known facts of physiology."

The report of the Committee of the Medical and Chirurgical Society of London contains the following:

Stage of Anæsthesia at which Death occurred.

Before full effects of choloroform,	50
During " " "	52
Not stated,	7
Total	109

Thus it will be seen that a great many deaths occurred before insensibility was established, and few when a profound action of the anæsthetics was sustained.

It is a generally-accepted fact that ether is less dangerous than chloroform, but testimony, by truthful authors, reports deaths from ether. Trousseau reports nineteen. The Boston Society for Medical Improvement reports thirty-six.

Chloroform death-rate is much above that of ether in frequency. The relative danger of these two agents is impossible without figures, which cannot be obtained. Death occurs chiefly among males.

Dr. Snow's proportions are three males to two females; Kidd's, four to one; Sansom's, 2.8 to one. As to age, thirty years is stated as the average. The strong and muscular resist anæsthesia most, and, when produced, it is often deep coma and profound stertor. The feeble bear anæsthetics better than the strong. Children are the best subjects of all. Women are better than men. Many deaths occur in the inebriate. Fatty degeneration of the heart is probably to be feared more than any other disease. The following is the diagnosis: Tendency to fainting; occasional dyspnœa, from congestion of the lungs; indication of atheroma of the arteries; feeble and intermitting pulse; countenance of a yellowish hue; congested state of the capillary vessels of the cheek. Stethoscopic examination reveals a feebleness in proportion to size of heart.

Chloroform has been detected, in the different tissues after death, in the following proportions: Blood, 1.00; brain, 3.92; liver, 2.08; flesh, 0.16. Distention of the right side of the heart with dark and fluid blood.

MODE OF INHALATION.

The best authorities state that all the anæsthetics (with exception of nitrous oxide) must be diluted with atmospheric air. Dr. Anstie gives 3.5 per cent.; Chloroform Committee, 3.5; 5 per cent. as the maximum amount—that is, 5 grains of chloroform to 100 cubic inches of air. The same may be said of bichloride of methylene and tetrachloride of carbon.

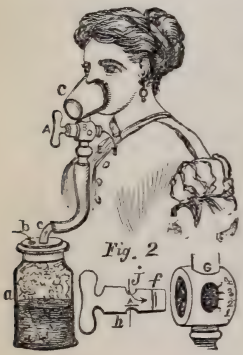
Ether, being a much less powerful agent, can be used in much larger per cent.

There are various modes used to administer the anæsthetics (vapors, not gases), such as the handkerchief, towel, sponge, cone, and by inhalers.

The great objection to nearly all these modes is, that we are in ignorance as to the strength of the vapor inhaled at any given time. At one moment, the air may be strongly impregnated with vapor, and, at another, pure atmospheric air is inhaled, so that there is no certainty about it.

The local effects on the air-passages, when *strong* vapor is inhaled, are to produce spasm, manifested by coughing, and, if continued, struggling, and possibly sickness. On the other hand, if the vapor is well diluted with atmospheric air at first, the air passages come gradually under the influence of the vapor, and the patient passes calmly into the anæsthetic sleep.

To accomplish this desirable end, I have constructed an inhaling apparatus, which will be readily understood by a reference to the accompanying figure:



DESCRIPTION.

a. Bottle loosely filled with a sponge.

b. Tube passing to the centre of the sponge conveying air.

c. Tube conveying the vapor from the bottle.

A. Faucet containing the inhalation and exhalation valves and air-passage, and revolving one-sixth of a circle.

C. Face-piece, fitting over the mouth and nose, with a flexible border. (Two sizes.)

FIG. 2.—FAUCET WITH THE VALVES.

h. Inhalation-valve for the passage of the vapor.

f. Exhalation-valve for the breath to pass out.

j. Passage for the vapor in inhalation, and the breath in exhalation.

g. Fresh-air passage, with an index to show the quantity of vapor or air being inhaled at any given time.

The relative proportions of vapor and air are changed by the revolution of the faucet (*A*) over the inhalation-valve (*h*, Fig. 2) and the air-passage (*G*, Fig. 2). These proportions are shown by the index at *G*. Thus revolving from 1 to 4 increases the vapor, and in the same proportion decreases the air from 4 to 1 *vice versa.* 1 is the minimum amount of vapor and the maximum amount of air. 4 the maximum amount of vapor and minimum of air.

When the patient inhales, the air passes into the bottle at *b*, causing the liquid to evaporize on the upper half of the sponge, and passing out at *c* into the inhaler, to be inhaled, the amount of vapor or air being regulated by the revolution of the faucet over the inhalation-valve and air-passage.

The bottle should never be more than half full, so as to allow evaporation on the upper half of the sponge.

The value of this inhaling apparatus consists in—

1. *Its safety.*—Air is at all times inhaled with the vapor, producing *good* anæsthesia without asphyxia. It is under complete control of the anæsthetist.

2. *Efficiency.*—The gradual inhalation of the vapor produces *less spasm* of the *epiglottis* (coughing), *struggling* or *sickness.* Anæsthesia is quietly produced and maintained. Rapid recovery from the anæsthetic.

3. *Economy.*—As all the vapor must pass from the bottle to the lungs, there is consequently no loss of the anæsthetic, and little or no smell of ether in the room; a saving of two-thirds of ether or chloroform over the old way of administering.

4. *Simplicity.*—Consisting of an inhaler (mixing vapor and air at will), connected to a bottle, from which the anæsthetic is inhaled.

5. *Cleanliness.*—As the apparatus is made of hard rubber and glass, it is readily kept clean.

A flexible border is stretched over the face-piece for children, or inhalation by either the mouth or nose. For the administration of nitrous oxide, the inhaler can readily be applied by connecting it to the gasometer or bag instead of the bottle.

I present here a summary, from a record of cases of anæsthesia with this apparatus, from the report of Bellevue and Charity Hospitals.

Whole number of cases, 50: males, 37; females, 13. Maximum age of patient, 58 years; minimum age of patient, 15 months.
Maximum time of ether inhalation, 1h. 10 minutes.
Minimum " " " 8 minutes.
Maximum time to produce anæsthesia, 12 minutes.
Minimum " " " 1½ minutes.
Whole amount of ether used, 256 ℥.
Minimum " " " 2⅔ ʒ.
Maximum " " " 6½ ℥.
Average amount of ether used, 2 ℥ 5 ʒ.
Average time to produce anæsthesia, 5 minutes 7 seconds.
Average time anæsthesia was kept up, 27 minutes 24 seconds.
Average age of patients, 28½ years.

Or, on an average of the above cases, 2 ℥ 5 ʒ of ether will produce anæsthesia 5.1 minutes, and maintain it for 27 minutes 24 seconds, in a patient aged 28½ years.

Only four cases of sickness, which possibly might have been prevented somewhat by previous care. One, a case of amputation in a man with delirium tremens, died on sixth day. Autopsy showed an abscess of the brain, fatty degeneration of the heart, with old pericarditis. He went through the etherization very well. Had no delirium after the operation.

An impromptu inhaler may be made as follows: Procure an oblong piece of stiff paper (a newspaper will do), about eighteen inches long by twelve inches wide. Place upon it a napkin or pocket handkerchief and fasten it by a few pins. Now roll the paper so as to form a hollow cylinder of about four inches in diameter, the inside being lined by the napkin to receive the anæsthetic. Air will enter the hollow of the cylinder, evaporating the anæsthetic and at the same time diluting it.

Mixtures of chloroform, ether, and alcohol have been advised, to avoid danger from the depressing influence on the heart's action.

The unequal rate of evaporation of the fluids is a prominent objection among others.

The best dilution, to my mind, is a *well-measured sufficiency of atmospheric air.*

The following general rules are to be observed in administering the anæsthetics:

I. The anæsthetist should confine himself *exclusively* to the administration, and watch closely the symptoms.

II. The indices of danger are—1, the respiration; 2, the pulse; and 3, the countenance.

III. To prevent sickness, do not allow the patient any solid food *four hours* or liquid nourishment *two hours* before the operation. All alcoholic stimulants to be given at least *one half hour* before the anæsthetics are given, as this should be through the system and not in the stomach as one cause of sickness.

IV. Reassure the patient by gentle words and actions. Place your patient in a horizontal position, with the head raised a little, to let mucus and saliva go down the throat, and facilitate the breathing.

V. Loose the clothes and give all the muscles of respiration free play—especially the diaphragm. Keep the body warm, and thus assist circulation and respiration.

VI. Avoid the spasm of the epiglottis (manifested by coughing), by the gradual inhalation of the vapor, as this spasm undoubtedly affects the stomach also.

VII. Muscular tremor is always followed by muscular relaxation. In the strong and healthy this change is often quite sudden, so that care must be exercised, when the tremor subsides, to let the patient breathe fresh air freely.

VIII. Cover the patient's eyes with a napkin while recovering from the anæsthetic, until sensibility and consciousness fully return, as it keeps them quiet (and they not unfrequently fall into a natural sleep), for applying dressings, etc.

IX. Fresh air is the best stimulant for recovery. Let the patient exhale freely, to eliminate the vapor from the system. Give a warm cup of coffee or tea, and, if the patient is weak, add a little wine or brandy.

Resuscitation, in cases of danger, is accomplished by the only efficient stimulus, respiration, either natural or artificial.

Draw forward the tongue with your fingers or forceps, and keep it there by some means. Use either mouth-to-mouth inflations or by the methods of resuscitation by Dr. Marshall Hall, Sylvester, or Howard. The first is probably well known, and for that reason, and also that I much prefer the others, I will not give it here.

Dr. Sylvester's method is as follows: Draw the tongue forward. Place the patient on a flat surface on his back, slightly inclined from his feet upward, the chest being elevated on an impromptu cushion. Then grasp the arms and press them firmly against the sides of the chest. Next, immediately to raise the arms by the sides of the head and keep them stretched steadily upward and forward for two seconds. Repeat these measures alternately, with long perseverance and unfailing regularity, fifteen times in a minute.

Dr. Benjamin Howard's[1] *Direct Method* of artificial respiration is as follows:

> "The patient is laid on the ground upon his back, his arms fully extended backward and outward, a firm roll of clothing being placed

---

[1] *Medical Record*, December 15, 1868, p. 467.

placed beneath the false ribs, so as to throw their anterior margin prominently forward. The tongue being held forward by an assistant, the operator, facing the patient, kneels astride his abdomen, and places both hands so that the balls of the thumbs rest upon the anterior margins of the false ribs, the four fingers falling naturally into four of the lower corresponding intercostal spaces on each side.

"The elbows of the operator being then planted against his sides, he has but to throw himself forward, using his knees as a pivot, and the entire weight of his trunk is brought to bear upon the patient's false ribs. If, at the same time, the fingers of the operator grasp and squeeze the false ribs toward each other, these combined actions crowd the false ribs upward and inward, producing the greatest possible motion of the diaphragm and displacement of the contents of the pulmonary air-cells.

"The operator then suddenly lets go and returns to the erect position upon his knees, where both the in-rush of air and the natural elasticity of the ribs at this part cause instant return to their normal position.

"This, repeated with proper rhythm and frequency, constitutes the entire process.

"The advantages of this direct method over the indirect method of Sylvester and Hall, Dr. H. claims, are:

"1. It is more simple.

"2. The degree of compression is felt and can be regulated by the operator.

"3. All the available anatomical means for the displacement of air in the cavity of the chest are completely used.

"4. While the necessary motions are in progress, the tongue may be steadily held out, the limbs and entire body be dried and rubbed without interfering with the operator.

"5. No time is lost in superfluous motions.

"6. It is less fatiguing to the operator.

"7. It is more quickly taught to a bystander."

Galvanism of the phrenic nerve may also be used by placing one of the poles (armed with a wet cloth or sponge) over the situation of the phrenic nerve where omo-hyoid and sterno-mastoid cross the other pole along the course of phrenic, or at its periphery over the diaphragm (seventh intercostal space). The current should be interrupted at regular intervals, to imitate natural respiration.

This can be applied in Dr. Howard's method, without interruption. Warmth and friction should always be applied. Warm air to the lungs by a bellows, when possible. When air cannot reach the lungs by the mouth, tracheotomy may be performed. Stimulants may be given by the rectum and by the mouth when the patient has recovered so as to swallow.

Art. III.—*Case of Fracture of the Odontoid Process and Body of the Second Cervical Vertebra, with Dislocation of the Atlas; Post-mortem Digestion of the Stomach; Perforation of the Diaphragm, and the Presence of the Contents of the Stomach in the left Pleural Cavity.* Reported by Austin Flint, Sr., M. D.

Thomas Gilligan, aged 49, a bookseller, was admitted into Ward 32, Bellevue Hospital, October 12, 1868. He stated that his habits had been intemperate, and that he had led an irregular life. There were no symptoms denoting secondary syphilis, but he stated that several years ago he had a sore on his penis, not followed by bubo. The ailment which led him to come to the hospital was pain in the right lower limb. This pain had existed during the past summer, but had recently become more severe than previously. The seat and character of the pain, the situation of points of tenderness on pressure, and the absence of symptoms denoting articular, or any local inflammation, showed the affection to be sciatic neuralgia. Owing to the pain, he kept the bed most of the time; but he was accustomed to get up to go to the water-closet, and at times he walked about the ward. A hard, immovable tumor on the back of the neck was noticed. He attributed it to a blow received upon this part several months before his admission. At the time of his admission he complained of no pain in the site of the tumor. He did not call attention to any difficulty in that situation. Hence, the date of the blow, and the manner in which it was inflicted, were not ascertained. He was treated with anodynes and the iodide of potassium.

October 27th, the patient, for the first time, complained of pain in the neck, aggravated by motion, for which an anodyne liniment was prescribed. In the evening of this date, after the application of the liniment, all his limbs became suddenly paralyzed, but after a short time the paralysis disappeared. On the following morning, after sitting up in bed, the paralysis suddenly returned. The paralysis was nearly complete in the upper limbs. The lower limbs he was able to flex slowly in succession, but not simultaneously. There was notable diminution of sensibility over the limbs and body. There was no facial paralysis. The mental faculties were unaffected. He now complained of no pain, except when he was moved, and then he referred the pain to the nucha.

October 29th, the paralysis of the upper limbs was complete; of the lower limbs it was the same as on the previous day. The pulse was 130. The bladder and rectum were unaffected. The mental faculties were preserved. At evening the temperature in the axilla was taken, and found to be 104.° The pulse remained the same. He sweated profusely. The respirations were natural.

October 30th, the pulse was 120, and weak. His voice was feeble, and he complained of a sense of great prostration. There were tracheal râles. No reflex movements were excited by tickling the soles of the feet. There was some embarrassment of breathing on the morning of this date, together with tracheal râles. Death took place at half-past eleven A. M., on this date.

The foregoing account embraces the important facts noted in the hospital record. The interest which this case has, is in connection with the lesions found after death, which were not previously appreciated; the history is deficient in details, the absence of which is much to be regretted. Among other deficiencies, the circumstances showing clearly the mode of dying are wanting. The following account of the autopsy is from the curators' record-book:

Examination twenty-seven hours after death. Brain and membranes are healthy. A hard fibrinous plug is found in the left anterior cerebral artery. The first cervical vertebra is dislocated forward, the odontoid process being broken off and carried forward with the atlas. The ligaments between the atlas and axis are much stretched. There is old ecchymosis of the ligaments and the surrounding muscles. After removing the ligaments and muscles, the left articulating process of the second cervical vertebra is found to be broken off, and the left posterior half of the body of this vertebra is absent, only one small fragment of bone remaining. There is a good deal of reparative material about the fracture. The second cervical vertebra is loosened from the third, but not dislocated. The cord is soft, but shows no marked changes, and the meninges appear to be healthy.

The heart is normal, save that the weight is twelve ounces.

The lungs show fibrous induration, and calcareous nodules at the apices, with emphysema of the upper lobes. The lower lobes are much congested, and contain spots of lobular pneumonia.

The stomach has undergone *post-mortem* digestion to such an extent that a considerable portion of the large cul-de-sac is destroyed, together with the diaphragm in contact with that part; and the contents of the stomach have escaped into the left pleural cavity. These contents consist of a grumous liquid, with no solid matter.

The liver weighs three pounds twelve ounces. The kidneys weigh twelve ounces, and are congested. The spleen weighs seven ounces.

There are no appearances denoting either peritonitis or pleuritis.

The cervical vertebra, together with the stomach, and a portion of the diaphragm, were shown by me at a meeting of the New York Pathological Society, November 11, 1868. These specimens are preserved in the Hospital Museum.

REMARKS.

As regards the fracture of the neck, the remarkable points in this case are the extent of the injury, the absence of subjective symptoms, and the period which elapsed before the paralysis occurred. The blow had been received some months before the admission of the patient into the hospital. Whether it was made by the hand alone, or by a club or a missile of some kind, was not ascertained. The patient was not communicative in relation to the matter, and did not of his own accord call attention to any injury of the neck. A certain amount of dislocation must have existed at the time of his admission, for this must be the explanation of the projection which was noted as a hard, immovable tumor on the back of the neck. The occurrence of a greater amount of dislocation than had before existed is probably the explanation of the sudden general paralysis. The disappearance of the paralysis after a short time may be explained by supposing that the bones resumed the situation which they had before the first paralysis took place. The second occurrence of the paralysis, which persisted to the time of death, was probably caused by a renewal of the increased amount of dislocation.

The frequency of the pulse, and the high axillary temperature noted on the evening previous to the day of his death, were probably attributable to the lobular pueumonia; and it is, perhaps, most rational to consider this pulmonary affection, in connection with inability to remove by expectoration morbid products from the bronchial tubes, as the immediate cause of death.

As regards the occurrence of *post-mortem* digestion of the stomach and diaphragm, the case is not novel. Cases have from time to time been reported since the observations of John Hunter, published in 1792. Such cases, however, are extremely rare. The remarkable points, in this case, relate to the absence of the conditions which have been considered as essential to the digestive action of the gastric juice on the stomach and adjacent parts in the cadaver. Instances of this kind have generally been observed in cases of sudden death, shortly after the ingestion of a meal. In the case now reported, the death was not sudden, and the patient had taken nothing but a moderate quantity of liquid nourishment during the two days preceding death. Another condition, supposed to be essential, is, that the body, after death, should be exposed to a high temperature. The body in this case was removed directly after death to the hospital dead-house, which is not heated, and the death, it will be observed, occurred on the last day of October.

Art. IV.—*Concealed Intra-uterine Hæmorrhage during Early Pregnancy.* By Stephen Rogers, M. D., New York.

The theme for this paper was furnished by the following case:

Mrs. ——, a mother of several children, and of about thirty years of age, menstruated in the month of January; passed her menstrual epoch for the following February with no appearance of the menses, and at about the same time began to suffer the usual rational signs of pregnancy. At the return of the menstrual epoch for March she experienced a very slight show, the signs of pregnancy still continuing. About two weeks subsequent to this show, and at about ten weeks of supposed pregnancy, she began to suffer a slight pain in the abdomen, referred to the hypogastric region, and increased sickness at the stomach. At about the same time a tumor made its appearance, or, at least, was first detected, a little to the left of the central line of the hypogastrium. It is described by the patient and her husband, and also by her physician, as, at this time, and for a day or two after, about the size of an ordinary orange, could be grasped by the fingers through the abdominal walls, and was but little, if at all, tender to the touch. They also state that, during the first two days after its discovery, the tumor was at one examination found to the opposite or right side of the hypogastrium, but that it did not remain there long, returning to its first position in the left side. It grew so rapidly that, at about a week after its discovery, the abdomen was very visibly enlarged by it, so much so that the attention of the patient's friends was attracted by her size, as remarkable for her supposed time. The lateral situation of the tumor was gradually changed, till, at the end of about two weeks, it had become a *central hypogastric tumor*, giving a size to the abdomen equal to that given by the gravid uterus at five to six months of pregnancy.

At about this time she had a sudden and profuse hæmorrhagic discharge per vaginam, the quantity being, as stated by the patient and attendants, from three to four quarts. It was accompanied by vomiting and great depression, and by the almost total disappearance of the tumor. It, however, rapidly returned after the cessation of the flow of blood, and in a few hours had regained its previous size. It continued to increase day by day, till it gave the abdomen the size of a *large* abdomen at full term of gestation. This was the condition a very few days after the hæmorrhage above mentioned. The physicians in attendance at this time report that, since the hæmorrhage described, there had been no considerable loss of blood, simply a slight sanguineous oozing from the genitals; that they then found the os uteri somewhat patulous, and occupied by a firm blood-clot; that symptoms of excessive loss of blood were very prominent, and that the depressed condition of the patient gave rise to the gravest fears for the result. An external examination of this large elastic tumor left little doubt on the mind of the consulting physician, Prof. Fordyce Barker, that it was uterine; and its history, together with the fact of its mouth being plugged with a blood-clot, and that an elastic sound could be passed through the cervix to almost any distance without meeting with more obstacle than a coagulum would offer, convinced them that the tumor was simply an expanded uterus, and that its cavity was filled with blood, more or less coagulated. How this condition was produced was a matter of much obscurity; the consulting physician inclining to the opinion that it was a case of original tubal pregnancy, and that hæmorrhage from its cyst had taken place into the cavity of the uterus in some unknown way.

There was, however, no diversity of views as to the indications for treatment, which were obviously to evacuate the uterus of its contained blood, and to secure its permanent contraction afterward. For this purpose, the perhaps pioneer idea of stimulating the suddenly-expanded and probably almost membranous walls of the uterus, to contraction, by the use of ergot and nux vomica,[1] occurred to the consulting physician. Happily for all concerned, the result sought was realized. The contractile efforts of the uterus were promptly induced by the medicine, and it soon emptied itself of the large amount of blood, in clot and fluid form, which it contained, and remained so contracted. At about fifteen hours after the commencement of the administration of the medicine, the time we first saw the patient, the uterine tumor was about the size of the uterus after ordinary labor; there was still some slight sanguineous oozing, and the medicine was continued. During the next day a small mass of clots and membranes was discharged, and all untoward symptoms then ceased, and all traces of a uterine tumor disappeared.

A careful examination of this mass was made, and it was found to be in part composed of fœtal membranes, with many of its chorion villi in a state of cystic degeneration, while others were in a normal state. With the exception of unusual hypogastric tenderness and threatening metro-peritonitis for a day or two, the patient had no unfavorable symptom after her delivery, and made as rapid a recovery as usual after so severe losses of blood.

REMARKS.

The points of this case to which we wish to call attention are: (*a*) the fact that the symptoms of pregnancy had existed in this case not more than nine or ten weeks; (*b*) that then *pain* was felt, soon followed by the appearance of a tumor, in one side of the hypogastric region, a tumor so prominent and well-defined as to be grasped by the fingers through the abdominal walls; (*c*) that on one occasion it was found shifted, or, at least, there was a tumor in the opposite side of the hypogastrium and none in the left side, but that it soon disappeared from the right side and reappeared on the left side; (*d*) that it rather gradually became a more central, and at length an unquestionably uterine tumor—the final demonstration that this was its character having been effected by the first hæmorrhagic attack; and (*e*) that, though so suddenly and enormously dilated, the uterine walls still had contractile power sufficient to evacuate its contents of blood and clots, and finally of the ovum, under the stimulation of ergot and nux vomica. That this was one of those comparatively rare cases of hæmorrhage into the cavity of the uterus during early pregnancy does not appear to me to admit of a doubt. The only possible reason that can be advanced in support of the theory that it was an extra-uterine fœtal cyst, bursting into the cavity of the uterus, is found in the fact that there was a lateral tumor during the early part of the course of this case. We cannot but regard it as one of the most remote pathological possibilities that an extra-uterine fœtal cyst should so involve the whole uterus as to transform itself into a really dilated uterus, as this was shown to be, both by the sound and by the action of the ergot. It is made still more improbable by the appearance of the ovum in the discharges, with its villi in a state of cystic degeneration, a much less likely occurrence from an extra-uterine cyst than from the cavity of the uterus.

---

[1] This is a favorite prescription of Prof. Barker in cases of *post-partum* hæmorrhage, and all cases, indeed, where the prompt and efficient action of ergot is desired. To give it in a simply expanded uterus, as this was, has probably no precedent.

There, however, is no necessity for resorting to so purely a theoretical explanation of the phenomena presented by this case, for well-recognized pathological conditions quite suffice to explain all the occurrences in its history. But very little will be found written in the standard works upon midwifery and diseases of women, about occult uterine hæmorrhage during pregnancy, and especially during early pregnancy. What they do say, however, has an explanatory bearing upon this case, and we will quote concisely from some of them.

Dr. Hodge, for example, alludes to the subject in the following language:

"It occasionally happens, fortunately very rarely, that hæmorrhage exists, but there is no external manifestation of its occurrence. The blood is effused on the surface of the placenta, but does not escape; it collects even in large quantities between the placenta and membranes and the internal surface of the uterus, constituting, therefore, what has been termed '*occult hœmorrhage.*' That such accidents may occasionally ensue, there can be little doubt, although, *a priori*, it would seem to be very improbable, as the uterus is a *plenum.* The whole cavity is occupied by the ovum distended by the liquor amnii, an incompressible fluid; while the tissue of the uterus is generally dense, and so abundantly supplied with irritable muscular fibres that its dilatation could hardly have been anticipated. Experience proves, however, that in some instances the uterine walls yield at the place of effusion, so as to form a prominence externally. The blood is thus effused, sometimes to such an extent as to prove fatal. The diagnosis of this occult hæmorrhage is, of course, difficult, and patients, indeed, have perished from this cause, the character of which had not been suspected. If, however, there be uneasy sensations, sometimes amounting to pain, in the uterus, and if, by careful examination, this organ should be found irregular in its form, with a marked prominence of a soft, although firm, character, and if evidence of general weakness and exhaustion should appear, without any other reason, it may be inferred that hæmorrhage exists in the uterus, although there be no vaginal discharge of blood."—(" System of Obstetrics," p. 473.)

A more accurate general description than this, of the symptoms presented in the case we have related, could scarcely be given. The pain or uneasiness in the uterus, and the irregular dilatation of its walls, forming the tumor felt by the patient and others, were all present, as were the signs of loss of blood and oppression. The appearance of the tumor, on one occasion, on the opposite side, was probably the result of manipulations, which pushed the uterus over, thus throwing the tumor to the opposite side of the pelvis, whence it returned as soon as it was allowed to rest.

The following remarks from Dr. Tanner, in his " Diseases of Pregnancy," may be read with instruction in this connection: "A few of these interesting examples of *concealed accidental hæmorrhage during gestation* have been recorded by various authors, and from them the two prominent facts may be gleaned, viz., that the early symptoms are obscure, while the danger to life is great. The symptoms produced by this condition are just those which are due to loss of blood generally; with this important addition, that the uterus is found tense and dilated, and perhaps *irregular in form*, while it also gradually enlarges as the disposition to syncope increases. Of course, the results, too, are more appalling in the later than in the earlier months, for not only do the blood-vessels get larger as the time of parturition approaches, but the uterus seems then to be capable of greater expansion. Out of the ten published cases of concealed hæmorrhage which which I am acquainted, seven mothers perished.[1] In the fatal cases, the accident occurred at full term; whereas, of those which recovered, two were seven and a half months gone, while my own patient was eight and a half months advanced."—(Tanner, 2d edition, p. 432.)

Some estimate of the rarity of the case we have related may be made from the fact that Dr. Tanner, in all his research into the literature of the subject, found the history of no case occurring earlier than at seven and a half months of pregnancy; while in this case it took place, at latest, *two and a half months after pregnancy.* An irregular dilatation of the walls of the uterus is, therefore, recognized as frequently accompanying, if not characterizing, this accident.

In the case we have related, it obviously took place, and the left side of the uterus was the locality of a dilated aneurismal or pouch-like prominence, which gave rise to the suspicion that an extra-uterine fœtus existed at that point. The hæmorrhagic bulging out of the uterine walls was so extreme as to give the idea of a distinct tumor. It must be regarded as an aneurism of the walls of the uterus, from the pressure of effused blood between the chorion and uterus. Fortunately for the patient, this hæmorrhagic effusion became rather suddenly diffused over the whole interior of the uterus, effecting a general dilatation in time to prevent a rupture of the early dilated portion, and to save the life of the patient from fatal inter-peritoneal hæmorrhage.

---

[1] Another case has recently been reported by Brotherston in the *Edinburgh Medical Journal*, April, 1868; and quoted in the *New York Medical Journal* for October, 1868, p. 80.

In support of our idea of the pathology of this case, and of the general declaration of the aneurismal dilatability of the uterine walls, we will here introduce the following history of cases:

"A woman at two and a half months of pregnancy, while waltzing, felt suddenly, what she described, a cracking in the abdomen, and became faint almost immediately. Alarming collapse rapidly succeeded, and the abdomen became swollen and painful. While the symptoms of loss of blood were very marked, there was no visible hæmorrhage, and the neck of the uterus was natural. Some of the physicians who saw it regarded the case one of rupture of the liver, while others believed it to be acute peritonitis. The patient died in about thirty hours.

"The necropsy disclosed a great quantity of blood in the peritoneal cavity; at the fundus was a considerable rent of a circular form, two inches in diameter; the uterine tissue healthy, except about the rent, where it was evidently softened, and the torn surface rough and unequal. The ovum was found in the peritoneal cavity."—(*Trask on Rupture of the Uterus*, *American Journal of the Medical Sciences*, vol. xv., 1848, p. 112. *From Arch. Gen.*, 1825, p. 382.)

While it must be confessed that there is a want of clearness in this *post-mortem* record, we understand it to mean that there was found a softened and thinned portion of the uterine walls of about two inches in diameter; that the peritoneal covering over this portion was ruptured for more or less of the distance across it; and that through this rupture the blood and the ovum had escaped into the peritoneal cavity. If the correctness of this interpretation be admitted, then the condition indicated a circumscribed destructive dilatation of the uterine walls, by hæmatic pressure at that point, from blood effused between the ovum and uterus, a uterine aneurism in fact, into which the ovum fell at the moment of its bursting, and was finally extruded into the cavity of the peritonæum by its subsequent contraction.

The following case belongs to the same class, though the result was different:

"A woman, at the fifth month of her tenth pregnancy, was taken with feeble uterine pains, supposed to be labor pains, and the os was beginning to dilate. After twelve hours the pulse failed, she grew faint, and it became necessary to deliver by the crochet. The fœtus was putrid, showing that it had been lifeless some time. The woman died on the seventh day after. The *post-mortem* examination found the peritonæum raised from the left side of the uterus by a coagula, forming a large black tumor, and the walls of the uterus had lost their elasticity."—(Ibid., p. 113, *from Dublin Medical Journal*, vol. xvii., p. 218.)

It will be observed that no description of ruptured uterine tissue is given in this case, though Dr. Trask has quoted it as a case of rupture. We simply accept his rendering of the case, and introduce it here as one in which the aneurismal sac, still filled with black coagulum, was found a week after the fœtus, destroyed by sub-placental hæmorrhage, had been expelled.

The following history of this kind of accident is much more explicit and satisfactory:

"At about the fifth month of pregnancy, a woman expelled a dead fœtus after some pain, but with no hæmorrhage. No after-birth following, the physician in attendance introduced the finger into the uterus to remove it, but found nothing except a ragged opening into the walls of the uterus, and something soft at the bottom of the cavity, into which this opening led. Further exploration was not made, and the patient went on favorably for four days, no hæmorrhage occurring during this time. Then, however, violent pains of an expulsive character came on, soon followed by an acute abdominal pain and fatal collapse. The autopsy discovered a large amount of blood in the peritoneal cavity; an unusual enlargement on the right side of the fundus of the uterus, consisting evidently of a bulging out at that point of the tissues composing the walls of the uterus, and forming a projecting tumor of about two inches above the surrounding uterine walls, with a base of about two inches in diameter; the size of the uterus being at the same time eight inches long, by six inches in its greatest transverse measurement. This tumor had the vascular appearance usual to an extra-uterine fœtal cyst. On laying open the cavity of the uterus, as well as this projecting portion, it was remarked that no decidua was found; that, as the base of the dilated portion was approached, the mucous membrane became more reddened; and that the portion forming the opening into the pouch, which was nearly two inches in diameter, was ragged and hung in free projections all around its edges. The cavity of the dilated and projecting portion of the uterus was filled by a mass of placenta. Through the peritoneal covering of the summit of this pouch, or projection, was a rent about three-fourths of an inch in length, whence the fatal bleeding had taken place, and between the edges of which placental villi were seen projecting."

This was unquestionably a case of concealed hæmorrhage between the placenta and uterine walls. The pressure of the effused blood dilated the muscular structure of the uterus at this point, and thus, little by little, separated the placenta from the uterus so far as to destroy the life of the fœtus, which was soon expelled, and it is not difficult to comprehend how the contractions of the uterus, which so expelled the child, might force the placenta into this pouch-like dilatation of the fundus, over which it was implanted. The presence of the placenta, then, in the pouch, is precisely what might be expected, for this portion of the uterus, weakened by distention, would, on account of its feeble contractile power, favor the deposit there of any *débris* left by the more powerful expulsive force of the surrounding uterus. The ragged condition of the surface, on and about the commencement of this pouch-like dilatation of the uterus, was no doubt the placental decidua, the substance usually found in more or less abundance at the seat of attachment of a placenta. That the already attenuated walls of this dilated portion of the uterus might become daily more enfeebled, both by inflammatory destruction and by the process of degeneration which attends involution, and that both these processes would be hurried on by the presence in the pouch of decomposing material, can be readily comprehended; and that, as a consequence, sooner or later, the muscular fibres and remaining coverings of the summit of the pouch would give way, involving in the rent, perhaps, vessels of considerable size, as in fact did occur in this case on the fourth day. The case, therefore, is in all its points clearly one of concealed hæmorrhage under the placenta, terminating fatally in rupture of the dilated or aneurismal pouch of the uterus.

The record of this case may be found in the *Trans. of the Ob. Soc. London*, vol. ix., and is reported by Dr. Braxton Hicks.

It is due to the distinguished author of that report to say that it is reported as a case of *inter-mural fœtation;* a diagnosis which, in our opinion, has neither *physiology*, *pathology*, nor necessity to excuse it.

Further proof in support of the possibility of aneurismal distention of portions, more or less circumscribed, of the uterine walls taking place during pregnacy, without any external signs of hæmorrhage appearing, does not seem to me necessary. It must be admitted as a pathological fact, and hence the presence of tumors in these cases is easily explained as an early symptom.

Now we will review some of the recognized causes of this hæmorrhage. Perhaps the most frequent cause is the one which existed in the case we have related, viz., cystic degeneration of the villi of the chorion.

Most authors who have written upon this subject, Dr. Tanner among others, ascribe a tendency to repeated hæmorrhage to this diseased state of the ovum. This, however, is not stated by any of these authors, so far as we know, to be a cause of occult hæmorrhage. It does not appear to us difficult, however, to see that hæmorrhage, more or less circumscribed, between the surface of a diseased chorion and the uterus, might be so hemmed in by sound structures as to exert all the pressure required, upon the corresponding portion of the uterine wall, to expand it into the kind of aneurisual tumor we have described. That this was the pathological history of the case here recorded, there is every probability for believing.

While the separation of the ovum from the uterus, and its expulsion, is the usual result of this disease of the chorion (a result which occurred to this same patient about one year previous to the accident we record), it must be admitted as at least probable, that the hæmorrhage may be retained for an indefinite time and in indefinite amounts constituting occult hæmorrhage. Though we have no means of demonstrating its truth, we believe the cause of hæmorrhage in cystic disease of the chorion to be a destructive or ulcerative degeneration of the decidual tissue in contact with the cyst, including uterine vessels of more or less magnitude which supply that tissue. The hæmorrhage would hence occupy the cavities about the chorion cysts for the time, its subsequent extension into aneurismal or apoplectic cavities being a work of time and the pressure of the escaping blood.

Another recognized cause of the various kinds of uterine hæmatocele, and of this kind of concealed hæmorrhage, is destructive inflammatory softening of the substance of the uterus. Dr. Tanner illustrates this point of pathology by the relation of the following case:

A woman entered the Lying-in Hospital, complaining of general ill-health simply, and slight pain at the upper and inner part of the thigh, and some redness at the same point. She died suddenly on the day of admission. "On dividing the parietes of the abdomen, the uterus was seen of a deep purple, or almost black color, while its texture was found remarkably soft, and its mucous surface covered with grumous blood." He then adds the following remark: "The occurrence of rupture of the uterus during pregnancy, is, we believe, only to be accounted for on the supposition that the tissues have been previously softened by the inflammatory process. It seems otherwise incredible that an attack of vomiting, or a fit of passion, should suffice to rupture the walls of the womb, though these circumstances would be quite sufficient when the parts had previously been weakened by disease." The following cases will illustrate still further this subject: A recently-married woman, aged 20 years, in tolerable health, was suddenly seized with vomiting at about the time of quickening, and died in less than an hour. At the necropsy a rent of five inches in length was found in the anterior part of the uterus from the cervix. The fœtus was found enveloped in coagula outside the uterus, and the uterine substance was soft and easily torn, and it was covered with dark-colored spots. It was supposed that the feeble movements of the fœtus at the time of quickening had effected the rupture of the uterus, which had been greatly weakened by disease.

We, however, think it much more probable that it was a ruptured blood-cyst in the substance of a diseased and much-softened uterus.

This case is quoted by Dr. Trask, *American Journal of Medical Sciences*, vol. xv., p. 111, 1848.

The mother of several children had (for supposed cause) labor brought on artificially at the sixth month, by rupturing the membranes. She was delivered in good condition. Twenty-four hours after delivery she was taken with vomiting and great pain, and died in collapse in twelve hours. At the autopsy the substance of the womb was found thick and pulpy, "evidently the seat of chronic inflammation," and there was an extensive rent through its anterior walls, both cervix and body. No remarks are quoted as to whether there was much hæmorrhage.—(Ibid., from *Providence Medical Journal*, p. 114.)

An unmarried girl of 17, with no record of previous derangement of health, was suddenly seized with pains resembling colic, and soon died. Necropsy found the cavity of the abdomen filled with coagulated blood surrounding a fœtus of three or four months. The uterus was ruptured along its right side from the fundus to near the neck. On this side of the organ its walls were extremely thin, so much so in some places as to leave little else than peritonæum, but the opposite side, however, the seat of the attachment of the placenta, was about one-third of an inch thick, and not remarkably changed in structure. The thinned portions of the walls were also very friable.

This was clearly a case of degenerative and destructive disease of the uterine muscle, which finally resulted in its rupture from the pressure of the ovum. It is to be regretted that the antecedent history of this case is so meagre. Inflammatory softening of the uterine muscular structure must, therefore, be regarded as a cause of rupture and hæmorrhage, and the latter may occur first or simultaneously with the former. If first, it will be more or less occult, and will be extremely liable, by its accumulation between the ovum and the weakened portion of the wall, to produce the uterine tumor we have described, if not a final rupture of the distended walls. This condition may, of course, take place under the placenta or elsewhere.

We may, no doubt, add to these causes of occult hæmorrhage that of traumatic separation, or laceration of the placento-uterine structures. Such a case would have a history which would point to its character.

Allied to this inflammatory softening, and probably often the chief cause of it, is that condition known to pathologists as uterine *thrombus*. That it may be the primary and exciting cause of changes that finally result in hæmorrhagic effusions beneath the peritonæum of the uterus, and in fatal hæmorrhages into the uterus, cannot be well contradicted. The following histories are models of this kind of cases:

"A woman of 35 was delivered for the seventh time, the child evidently having been dead for some time before its birth. It was a breech presentation, and an easy labor of about four hours' duration, and the placenta was promptly expelled. No hæmorrhage followed, and every thing went on well till the fourth day, when she was suddenly attacked with violent hæmorrhage. Within four minutes of the first gush of blood the countenance had become perfectly blanched, there was great anxiety, and a cold, clammy perspiration bathed the surface. There was no pulse at the wrist, the bed was inundated with blood, and it was still flowing from the vagina. The patient died an hour and a half after the first appearance of the hæmorrhage.

"The necropsy found the uterus well contracted down in the pelvis. On the left side of the cervix, about an inch from the os uteri, was observed a ragged, sloughy-looking opening, the edges of which were very irregular, and of a black ash-gray color. This opening, which was large enough to admit two fingers easily, communicated with a cavity the size of a small orange, formed in the substance of the cervix, forming a tumor, which projected so as to have been distinguished externally. The lining membrane of this cavity was rugous, of a firm consistence, and resembling very much the mucous membrane of the vagina. Opening into this sac were seen the mouths of five or six blood-vessels, large enough to admit a small bougie."

The doctor adds the remark: "That he had little doubt that the case was one of thrombus, forming in the structure of the cervix uteri, and bursting on the fourth day after parturition, the usual time when these bloody tumors give way. The displacement of the coagulum, which had temporarily closed the mouth of the lacerated vessels, occasioned a renewal of the hæmorrhage."—(*McClintock's Clinical Memoirs on Diseases of Women*, p. 287.)

The following case by the same author is a still more characteristic one:

"A woman of 25 years of age was delivered of her third child, after turning, it being a head presentation. The placenta was expelled in usual time without much uterine discharge, and she soon began to complain of pain and tenderness on pressure in the left hypogastric region. The tenderness and pain remained confined to a small part of the left hypogastric region, without distention of the abdomen. On the eighth day after delivery, she was seized with vomiting; and, soon after, a sudden and copious flooding came on, and continued until she was blanched; her pulse was almost imperceptible at the wrist, and the bed upon which she lay was soaked through. She finally died of repeated hæmorrhages on the eighteenth day after delivery.

"At the necropsy, the abdominal organs were found generally healthy, but much blanched, but the uterus was not so small as usual at eighteen days after delivery. Near its neck on the left side, and between the folds of the broad ligament, there was some appearance of extravasation; and a sac, partly filled with bloody pus, was opened, and found to communicate by a large aperture with the general cavity of the uterus. On laying open the cavity of the uterus, a deep excavation or ulceration, capable of readily admitting two fingers, was found leading to this sac. The other parts of the uterus were healthy. This excavation was regarded by some as an abscess, but by others as the seat of a partial rupture of the organ." —(Ibid., p. 289.)

The following remarkable example of this accident will conclude the illustrations we shall produce upon this point. It is due to the distinguished author of this report (Dr. Graily Hewitt) to say that he records it as a *traumatic aneurism of the uterine artery*, a diagnosis in which we cannot agree:

"About four days after delivery, she was rather suddenly seized with great pain across the abdomen, the result, it was fancied, of violence committed upon her by her husband's kneeling upon her abdomen, though the woman denied that she had been so injured. About a week after this attack of pain, and nearly two weeks after delivery, she complained of great pain on pressure over the brim of the pelvis on the right, where there was a hard swelling, extending upward a short distance. The abdomen was tympanitic, and there was a dark bruised spot reaching from one side of the hypogastrium to the other, and down the right thigh two or three inches. At about this time, a slight flooding took place. On the 20th day after labor, there suddenly occurred a violent hæmorrhagic flow from the vagina. This was arrested, and, on the 31st day after her confinement, it was first observed that large quantities of yellowish matter came away each time urine was passed, though it is not stated whether this matter came from the urethra or vagina. On the 34th day after labor, another flooding took place; and on the 37th day after, she had a fatal flooding."

At the necropsy it was found that an abscess, still containing a large quantity of yellow pus, occupied the right side of the cavity of the hypogastrium, extending from the lower border of the kidney down to the uterus, with the cavity of which it communicated by an opening admitting a large quill. The intestines over the course of this abscess were matted together by inflammatory exudation, and formed part of the tumor felt during life. The uterus was still very large for the period since delivery, and at the lower part of the body, on the right side, there was found a depression or pouch opening into the cavity of the abscess. Through the bottom of this pouch, after laying open the uterus, a probe could be freely passed into the cavity of the abscess.

At the bottom of this same uterine pouch was also seen a small bloody tumor, an encysted coagulum in fact, about half an inch in diameter, which upon further dissection was found to communicate directly with the uterine artery of that side. This cyst was perforated at its summit, and it was presumed that the fatal hæmorrhage had taken place from that opening. Although there is a want of explicitness as to what tissues composed the walls of this suppurating cavity, we are apparently warranted in the conclusion that the muscular structures of the wall of the uterus at the locality of the pouch had been more or less completely destroyed, either by the pressure of an effused clot, or by inflammation, and had in consequence given way, forming the pouch described, by distended peritonæum. This belief is supported by the recorded additional fact that the tissues of the uterus, round the opening by which the abscess communicated with the uterine cavity, "were soft and friable." That an inflammatory softening had affected this portion of the uterus before death, is very manifest, but there may be much reason to believe that a uterine thrombus was the exciting cause.

We believe that the case was one of thrombus, and that it it had no dependence upon any fancied or real violence inflicted by the knee of the husband, simply because that portion of the uterus could not be so injured at the fourth day after delivery, its low position in the pelvis preventing any such accident. The dark, bruised appearance of the hypogastrium and the right thigh, which in this report is regarded as evidence of contusion, we think is more rationally explained by another supposition, viz., that the case was one of uterine thrombo-hæmatocele on the right side.

With this view of the case, we see no difficulty in comprehending how the coloring principle of the blood, effused under the uterine peritonæum, and into the folds of the broad ligament, might percolate along the sub-peritoneal areolar tissue of the hypogastrium, and of the femoral vessels, thus producing the discolored appearance mentioned as extending across the hypogastrium, and a short distance down the right thigh. The sudden occurrence of the pain of abdomen, together with the appearance of the tumor four days after delivery, followed by this discoloration, furnishes all the rational proof we need, that at that time a uterine thrombus was suddenly extended, and that a large amount of blood was poured out under the peritonæum, extending upward and outward between the broad ligament, forming the tumor felt through the parietes of the abdomen, a utero-pelvic hæmatocele. It will be noticed that this accident occurred at about four days after delivery, the exact time which Dr. McClintock states as usual for uterine thrombi to give way. This accident undoubtedly hurried on the destructive process going on in the surrounding uterine structures, and so far removed them, that, when the next hæmorrhage occurred, nearly two weeks after confinement, the blood escaped into the cavity of the uterus and passed by the vagina, and all of the subsequent hæmorrhages took place in the same direction. The purulent cavity, found more than thirty days after the formation of the blood-tumor, and which, according to the history of the case, began to discharge itself through the uterus some twenty days after that tumor was first discovered, is very easily accounted for. We cannot do so in plainer language than that employed by Dr. West, in speaking of uterine hæmatocele, in his work on Diseases of Women. He says: "Usually the blood poured outs peedily coagulates, then excites inflammation around it, and becomes enclosed within a sac, formed partly by the adhesions of the coils of intestines to the uterine appendages, and to each other, partly by false membrane. In the most favorable cases the contents of such sac become by degrees absorbed; in others, inflammation is set up in the cyst wall, pus becomes intermingled with the blood, and, instead of absorption of its contents taking place, the suppurating blood-cyst empties itself through the rectum, the vagina, or into the peritoneal cavity." In the case under discussion it emptied itself into the uterine cavity. In all its chief features it is exactly such a case as the cases we have just quoted from Dr. McClintock, and it therefore appears all the more strange that Dr. Graily Hewitt should say that Dr. McClintock gives no "instance resembling this one."—(*Obs. Transactions*, vol. ix., p. 249.)

How Dr. Hewitt could persist in calling the cyst wall of a blood-cyst *an aneurism*, when his own microscope showed him that it was composed of "fibrine and exudation matter," without a particle of arterial structure in it, we cannot understand. The fact that this suppurating cyst contained pure yellow, and not grumous pus, at the time of the autopsy, may be fairly accounted for upon the supposition that the bloody pus had been all discharged before death, a large amount having escaped, as we have seen, during the last week of life. Uterine thrombus must, therefore, be regarded as a cause of *post-partum* uterine hæmorrhage, at least. Now we have no means of proving that it is not also a fruitful cause of occult hæmorrhage during pregnancy. If it be admitted that thrombus may occur during pregnancy, then we can understand why all the other phenomena should be liable to follow. Dr. Montgomery gives a most clever explanation of it. He says: "It is to be recollected that just where the thrombus forms is precisely the situation in which the contractile power of the organ is most feeble; and, should it happen toward either side, it is then close upon the very part where the blood-vessels send in the largest supply to the uterus." How often has a thrombus determined the rupture of the uterus at the point on which it was located.

After this review of the various causes which may destroy or weaken the walls of the uterus, and induce hæmorrhage and rupture during pregnancy, we deem it proper here to allude to the danger of inducing rupture of the uterus by the injection into its cavity of considerable quantities of water, for the purpose of bringing on premature labor. Inasmuch as the uterus, when occupied by the fluids of the fœtal membranes, is filled by an incompressible fluid, the power employed in the introduction of water between the uterine walls and the fœtal membranes must be expended upon the uterus. We can therefore see that, should the water thus introduced reach a portion of the uterine walls softened by inflammation, or weakened by the presence of a thrombus, as above described, it would certainly accumulate in an expanded sac at this point, and, if in sufficient quantity, would rupture the uterus.

We have heard it rumored that two accidents of this character have taken place during the practice of bringing on premature labor, according to the plan advocated by Cohen. If these rumors turn out to be well founded, the theoretical danger we here suggest is a practical objection to this plan of inducing labor.

By a study of the subject of spontaneous rupture of the uterus, we become impressed with the prudence of keeping the danger of rupturing, even an apparently healthy uterus, by the sudden and forcible introduction, into its already distended walls, of so large amounts of water as recommended, and often practised by Cohen and others, constantly before us. Much less force has, no doubt, induced the rupture of the uterus during early pregnancy. If arterial pressure under the placenta may push out the muscular walls of even the healthy uterus, into an indefinitely dilated pouch, we can see no good reason for doubting that the hydraulic power of the pump may produce more suddenly a similar condition. In the case we here record, there can be no reason for supposing that the uterine walls were diseased. The fact that the process of dilatation was communicated to the whole uterine structure, and that it twice emptied itself of blood-clots, and finally of the ovum, is demonstrative, as it appears to me, of the final integrity of the uterine muscular structure.

The case will stand, not only in proof of this fact, but also of the efficient contractile power of a uterus simply dilated, and not physiologically developed. For it can scarcely be possible that a uterus may acquire the muscular development of ordinary gestation within the space of two weeks, the period this hæmorrhagic process was going on. And besides, it is recorded of this case, that as soon as the ovum and the remaining clots were discharged, the day after the second large discharge of blood, no uterine tumor could be felt, showing that there was but little uterine tissue.

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 8, 1869.

Dr. Geo. T. Elliot, Jr., President, in the Chair.

The President, at the request of the Society, gave a brief account of the recent meeting of the State Medical Society, in the course of which he stated that several important papers had been there read by members of the County Society of New York, and accepted for publication.

SURGERY OF THE CERVIX.

Dr. Thos. Addis Emmet read a long and important paper upon *The Surgery of the Cervix, in connection with the Treatment of certain Uterine Conditions familiar to all.* As this paper is published in full in the *Am. Jour. of Obstetrics*, we shall here merely indicate a few of its points:

Dysmenorrhœa and sterility had been too indiscriminately treated by division of the cervix, though there were certain cases which required it. Where they were dependent on flexure, this might be due to interference with the uterine circulation—a kind of chordee. They might depend upon causes wholly extra-uterine. The treatment must vary with the cause. In erosion, with follicular disease, large vaginal injections of hot water were invaluable as preparatory to other treatment, such as various topical applications to the cervix, by means of the "applicator," or intra-uterine injections. Dr. Emmet's favorite remedies, with their method of application and the conditions calling for them, were described at length. Other treatment failing, an existing flexure might be considered due to mechanical causes and demand surgical interference. The forms of flexure specially belonging to the unmarried and to the married condition, their consequences, their operative treatment, and its general results, were detailed. The paper dwelt upon the very different treatment required for anteflexion and retroflexion, and the serious effects that had followed a neglect of this distinction. It noted the bad results of the lateral division of the cervix, as well as of its lateral laceration in childbirth, with the appropriate treatment. It gave the indications for amputation of the cervix, and the precautions necessary to be observed in this operation. As cauliflower growth and malignant disease were now considered to be purely local in their origin, they might probably be effectually and permanently cured by amputation, if only they could be discovered and treated in their initial stages, before infiltration of the surrounding parts. The evils resulting from the abuse of caustics and the actual cautery, converting the cervix into "a mass of cicatricial tissue," claimed notice; and the surgical treatment to which alone the bad cases would yield. Follicular disease often brought about a similar condition, requiring the same treatment. Either one, if overlooked, might lead to the gravest impairment of the general health and become the origin of phthisis.

Dr. Noeggerath.—Dr. Emmet appears to consider flexure of the uterus as an effect of inflammatory disease. He compares the anomalous condition of the uterus with a chordee. From this we are led to think that the inflammation, originally seated in the mucous lining of the cavity, spreads to the tissue proper, bringing about a deposit of lymph in some portion of either the anterior or the posterior wall of the uterus. This, in its further development, produces ante- or retroflexion; or we might assume, according to the doctor's views, that the congestion and softening of tissue, in connection with an inflammatory condition of the mucous membrane, bring about the altered position of the organ. This latter explanation is somewhat similar to that proposed by Rokitansky, who, in opposition to the views of Virchow, explained flexion as a result of disease and hypertrophy of the mucous crypts, which, as Dr. Emmet correctly states, are found to exist even above the inner os. Rokitansky believes that the gradual enlargement of these mucous glands, by their pressure on the fibres of the muscular tissue, causes the latter to become atrophied and to lose their power to keep the womb in its erect position. The treatment employed by Dr. Emmet, for the relief of symptoms seen in connection with ante- or retroflexion, is apparently a very efficient one, and goes very far to corroborate the views proposed on this matter. It even seems to me that the doctor has based his pathogenetic theories on the effects of his generally so very successful treatment. It would take up too much of the time devoted to a discussion of a paper read on the same evening, to enter into all the merits of the question before us. I will therefore only briefly state my conviction, gained by experience of fifteen years' observation, that flexion is never the direct effect of an inflammatory action, be it of the lining membrane or of the uterine tissue itself. It is my firm conviction, that the symptoms of irritation present in cases of dislocation are either the effects of flexion or mere coincidence, aggravating all the signs of disease usually found in cases of ante- or retroflexion. This explanation is apparently in opposition to the view expressed above, as to the efficiency of treatment directed against the sources of irritation. But, if I admit that Dr. Emmet relieves all the symptoms seen in cases of dislocation, that he cures his patients, I deny that he produces the slightest effect in altering the position of the uterus; and I have not the least doubt that, out of a hundred women afflicted with anteflexion, not more than thirty per cent. are aware of the existence of uterine disease. An uncomplicated anteversion or anteflexion usually produces no symptoms whatever. Thus I only differ with Dr. Emmet in regard to the pathological origin or clinical importance of dislocations. With regard to the method and value of his treatment, I have hardly a word to add.

As regards the necessity of rest in bed, for days after the application of caustic remedies to the womb, with the view of avoiding accidents, I think the doctor exaggerates its importance. Severe inflammation of the peritoneal covering of the uterus will occasionally follow the use of caustics, no matter how the patients are treated afterward. I know that such cases do occur where the greatest possible care is taken to avoid them—they occur even in Dr. Emmet's institution; and it is my belief that the average amount of pelvic peritonitis, following the use of strong intra-uterine applications, is just as large where the patients are kept in bed and guarded against cold, as where they are allowed to be about, as soon as the immediate effects of the application, which last from one to six or eight hours, are passed over. It is of some importance to have this point decided. Suppose a physician in town applies a solution of some strong caustic to the canal of the body of the uterus, and the patient has an attack of peritonitis, from which she may either suffer for years or die in consequence, Dr. Emmet and his followers will accuse the doctor, having charge of her case, of carelessness, if he has omitted to have the patient in bed for at least a week. Now, my own experience has taught me that this great care is unnecessary. I always apply the chromic acid in my office, and allow my patients to walk home. Last Saturday week I saw a woman from Seventy-first Street, near Second Avenue. I used a solution of the acid, one part to two of water. She rode home immediately after the application, lay down for three hours on her bed, and then went about as usual. I saw her again last Saturday, and, when I found that the effect of the acid had not yet subsided, I made no further application. I have done this repeatedly, and do not think that I meet with more accidents than gentlemen who take great pains to prevent them. You will meet, from time to time, with a uterus where the use of caustics or astringents to the upper cavity is followed by perimetritis. The two most severe cases of inflammation which I have seen follow the use of caustic solutions were observed in two women, both of whom were kept in bed during and after the application.

The sweeping condemnation of pessaries by Dr. Emmet is not justified by the experience of others. Thus Prof. Martin, of Berlin, reports, in his work on versions and flexions of the uterus, ninety-seven cases in which he treated anteflexion by this means. In only three instances had he to remove it on account of excessive pain or hæmorrhage. In ninety-four cases the instrument was worn from one to nine months; forty cases were cured permanently; in fifty-four cases decided improvement, especially as regards dysmenorrhœa, was observed. Sixteen of these wore it from three to twenty-one months. But there are, in this city, numerous physicians and gynecologists, myself among the rest, who are in the habit of employing these instruments with marked benefit to their patients; and certainly pelvic cellulitis cannot be considered an ordinary effect of the introduction of a pessary.

As a general result of the first part of Dr. Emmet's paper, we may state that there exist cases of dysmenorrhœa and sterility, with or without flexion, the greatest part of which can be cured by relieving the catarrhal swelling of the mucous membrane, and the consecutive congestion of the uterine tissue proper, while, in some few, the constriction or spasm at the inner os does not yield to any other treatment than surgical interference. We must certainly welcome an avowal of these principles, by which the operation of incising the neck is reduced to very restricted limits; it denotes a most unmistakable progress in American gynecology. This change of view regarding the indications for surgical treatment is the more noticeable and important, because professed by a man who has usually been considered one of the principal advocates of the purely surgical treatment of uterine diseases.

That retroflexion in the second and third degree can be radically cured by the treatment just mentioned, I have no reason to doubt, since the doctor assures us so. The management described can, however, only be successfully resorted to in a private hospital. We other practitioners cannot afford to see a case of retroflexion daily, nor can we demand of the patients to keep for a length of time in a certain position. The average class of patients who apply for the relief of retroflexion have their daily duties to perform in the household. We are therefore compelled to treat their cases differently. In recent cases, that is to say, from three to six weeks after confinement, we succeed in replacing the womb forever, by the use of Sims's instrument, and even this need not be applied oftener than every third or fourth day. Where the disease has lasted for years, we employ either Hodge's or Scattergood's or Cutter's pessary, and in most instances without any preparatory treatment, since all the symptoms of irritation, tenderness, and so on, disappear without any further treatment.

The remarks of the doctor, with regard to bilateral section and eversion of the cervix, can be verified and corroborated in a great many instances. A second operation is usually necessary to do away with the ill effects of the first one.

In treating of the several indications for the amputation of the neck, I am somewhat disappointed to find that its amputation for the cure of chronic metritis of the body, in the second stage of development, has not been mentioned by the doctor. The value of all the other indications has never been doubted; in all those nobody ever denied the justifiability of amputating the neck. I know that the operation has been performed in the institution under Dr. Sims as well as under Dr. Emmet. Its value is not yet fully decided, its efficacy doubted by a great many. Ever since Dr. Braun, of Vienna, demonstrated microscopically, in a paper published in 1864, in the *Wiener Medicin Jahrbücher*, 1st vol., that the tissue of the hypertrophied body of the uterus underwent a fatty involution after amputation of the neck, I have performed this operation several times. And I may say, without being able to give at present any detailed account of the cases, that the operation in no instance did any harm; and further, that the great majority were considerably benefited, and three of the cases entirely cured, after all sorts of treatment had been applied, previous to the operation, without the slightest benefit.

As regards the method of operating, I consider the covering of the stump with vaginal flaps an unnecessary complication. Dr. Emmet believes that it is more apt to prevent recurrence of malignant disease than any other method of treating the stump. The same views have been cherished by surgeons in cases of amputation of the breast. When Dr. Martinet de la Greuse first made the proposition, in 1834, to cover the wound left after removal of the mamma, by transplanting some of the skin from its neighborhood, the proposition was generally received with great favor. French, as well as German and English, surgeons followed out his suggestion. But nowadays the method is generally abandoned as useless. I think the same holds good with regard to the cervix. If all the diseased portion can be removed, it is immaterial whether we cover the stump by transplantation or not. After three or four weeks it is impossible for any one to judge, from the appearance of the stump, whether it was left to heal by granulation or whether it was covered. If not all the cancerous tissue can be excised, it is better to leave the wound open, in order to destroy, by heat or caustics, any unhealthy-looking granulations. Nor does covering the stump even prevent severe hæmorrhage; and I think Dr. Emmet plugs the vagina, and applies cotton with the subsulphate of iron, after every amputation, to guard against this occurrence.

The only safe method of operating is amputation of the neck by a loop of platinum wire heated by electricity. The cut is always as smooth as that with a knife; and neither during nor after the operation does the slightest hæmorrhage occur. After having used the electric cautery now in four instances, I am so satisfied with its effects that I shall never exchange it for any other method. Whoever has seen what an amount of blood is occasionally lost after cutting off the neck with scissors, simply from the fact that the plug is expelled by vaginal labor-pains, will accept, without hesitation, a mode of operating which has all the advantages, and none of the drawbacks, of other methods.

In making these remarks, Mr. President, I have somewhat taken the part of an *advocatus diaboli*, but only for the purpose of showing the several points proposed in Dr. Emmet's very elaborate and highly interesting paper in a new light, in order to give occasion for further discussion.

Dr. Budd.—To the majority of the principles and doctrines which Dr. Emmet has enunciated I can give my most hearty approval; but there are one or two points that I cannot so fully indorse. He has spoken of the detrimental effects produced by the application of caustics to the neck of the uterus, mentioning particularly the nitrate of silver and the actual cautery. So far as the first is concerned, I am satisfied that I see daily the worst effects from it; but I am not prepared to say that these are due to the formation of cicatricial tissue. I do not believe that either of these agents, when applied to the cervix, will produce cicatricial tissue to anything like the same extent as when applied to the cutaneous surface; and several cases in my own experience demonstrate this view. I have in mind one that came under my hands several years ago, and was seen by many gentlemen, some of them now present, in which I applied the actual cautery some fifteen or sixteen times. The remark was made that there would be so much cicatricial tissue as to interfere with impregnation, or endanger parturition. But the woman soon afterward became pregnant, was taken in labor at the full period, and was delivered on the chair where she was sitting, before she could get to her bed. Now, it seems to me that an individual instance of this kind is enough to upset the theoretical objections to the actual cautery (of which I am particularly speaking), used for the purpose of melting down *indurations*, let them be due to what they may.

In general, anterior displacements occur in the unmarried, posterior displacements in the married. Anteflexion is congenital in a large proportion, if not in a majority of the cases; and far less than thirty per cent. of them present any symptoms. Posterior displacements, except when due to violence, seem to me to be either accompanied with inflammation, or to be the result of old inflammatory action; and therefore I think Dr. Emmet has done wisely in discouraging division of the anterior lip for their correction.

Dr. Peaslee.—With regard to the etiology of retroflexion, I see no reason why we should feel obliged to say that it is the result exclusively either of inflammation or of traumatic influences. I believe it an effect of many different causes. If I considered it always due to inflammation, I should, probably, as does Dr. Emmet, treat the inflammation for the removal of the cause, though it does not follow that this would remove the displacement. But, I feel as positive as I can be of any practical question, that retroflexion is often due to no inflammation or traumatic influence whatever, but simply to debility, to loss of tone in one or more of the normal supports of the uterus. We may have loss of tone in any of the ligaments; and then other causes, such as the weight of the superincumbent intestines, will produce displacement backward.

With regard to the treatment of retroflexion, I have to say unqualifiedly that I do not attempt to remove inflammation from the retroflected uterus in more than one case out of ten that come to my office. In about ten per cent. of the cases I do find symptoms of metritis; in perhaps half the remaining cases, congestion (for we can distinguish this from metritis); and in the others neither metritis nor congestion. If in such cases I can apply a proper supporter, the woman does perfectly well. I am not now speaking at all of intra-uterine pessaries, but of the various forms of intra-vaginal supporters. I say, without qualification, that about one-half, or at least one-third, of the cases that come to me with the second, and perhaps with the third degree of retroflexion, I replace at once, and treat by this means; and expect to find no other form of treatment requisite, if I can adapt an instrument. But the ability to adapt an instrument depends entirely upon the natural conformation of the woman. In some cases, but they are very exceptional, one may apply an instrument perfectly at first. In other cases, any one might know at once that no instrument could be made to fit. For instance, if the posterior vaginal wall is as short as the anterior, it is not possible to introduce an instrument high enough to reach beyond the point of flexion, as it must do to be of service. This brings up a point in the pathology of flexion which I consider of vital importance, since the whole matter of treatment by pessaries is dependent upon it—that is, that the point of flexion is *always* at the junction of the neck with the body of the uterus; it is never in the vaginal portion of the neck; and the supporter must always reach above that point of flexion to be of any avail whatever.

Concerning incisions of the cervix, I have but a single remark to make. I had occasion to say, before this society about a year ago, that there are certain eras in gynecology. There was that of nitrate of silver, and at first everybody used it. Much good was done by it under skilful hands, and much more harm under others.

Then came the era of pessaries, and these were run into the ground completely, until by and by some gynecologists took the position that they should never be used at all. And this extreme was as foolish as the other. Then came the incision of the neck, which was overdone in the same way.

It is a source of great gratification to hear a gentleman, who has been one of the pioneers in this matter, state to-night just what are the proper indications for its use. Three years ago this month, I said before the State Society that incision of the neck for flexions of the uterus is like tinkering in the basement of a building for leakage of the gas-pipe in the upper story; and I am happy to find this idea confirmed this evening.

Dr. Emmet.—I feel called upon to say a few words, because, in a subject extending over so large a field, I could speak of treatment only in a very superficial manner. I regard very little the position of the uterus. I believe that as a general rule version is forward before marriage, and backward during married life; but the position makes little difference; it is the engorgement which is the important thing. I think the difference has not been recognized which I wish to draw between flexion and version. I have never seen any instrument remove anteflexure or anteversion. In speaking of retroflexion I was speaking only of old cases, where we have almost always adhesions which prevent treatment by pessaries. Of course, if you can replace the uterus, and keep it in position by a pessary, you should do so.

Dr. Isaac E. Taylor was much gratified by some of the positions taken by Dr. Emmet, as he had lately been by Dr. Sims's recantation of some of his former views. He had himself never been able to see the great advantages of incision of the cervix, and he thought the cases very few where this operation had been effective. In his own practice he employed constitutional treatment rather than local, as a general rule; and even in cases not simply of acute, but of chronic, congestion, or of what might be called chronic inflammation, he resorted to constitutional treatment as well as local, and attributed to it the greater share in the improvement produced. If there were no adhesions, no chronic inflammation, no chronic engorgement, the division of the cervix might be justifiable. But otherwise the operation would be likely to give no permanent benefit, and should not be practised. The patient might be relieved by it for a month or two, but in the course of five or six months she would be as badly off as ever. The surgery of the cervix, then, had been carried to great excess, and constitutional treatment should be restored to something like its old position; though Dr. Sims would probably say that the uterus was a surgical organ, and should be treated exclusively by surgical methods. It was very important that the younger members of the profession should be impressed with sound ideas upon these points, and not be misled by the apparent brilliancy of an operation which was likely, in the majority of cases, to be more harmful than helpful, and, especially if unskilfully performed, to cast discredit upon the profession.

The speaker agreed with Dr. Noeggerath that anteflexion very frequently existed without the patient's being aware of any thing abnormal. If, however, it had occurred in consequence of some irregularity, attention should be given to the abdominal viscera. Minor cases of retroversion might be changed to anteversion by changing the position of the patient;

but this was not true retroversion. Amputation of the cervix he had never seen followed by bad results, even where performed just before menstruation. As to the effect of nitrate of silver and similar applications, he could not agree with Dr. Emmet, but held views more in consonance with those expressed by Dr. Budd, although he himself made little use of these agents. He did not see how the nitrate could induce the formation of cicatricial tissue, for even in the solid stick its action did not extend beyond the mucous membrane.

The President.—It is well known that Dr. Roberts has antedated many things commonly connected with the name of Bennett, of London.

Dr. W. C. Roberts.—I belong, as Dr. Peaslee would say, to the nitrate of silver era, and have no experience in the use of cutting instruments. I have dilated the cervix with bougies, etc., and have applied the nitrate of silver with good results. I have very seldom failed to cure the slight superficial abrasions, met with on the neck of the uterus, by the nitrate of silver, the acid nitrate of mercury, or the preparations of iodine. I have never seen any thing like cicatricial tissue produced by them.

The President remarked that, had he thought of taking part in the discussion, he should have been glad to say what had been so well said by Dr. Peaslee with regard to incision of the cervix and the abuse of pessaries in times past—views which he himself most firmly held. He hailed with much pleasure the broad and clear lines of treatment drawn by Dr. Emmet, which would undoubtedly prove of great service in the future. Without desiring to oppose to them his own views, or to appear in the character of a prophet, he might venture to say that the operation of incision would yet be confined to still narrower limits than those the doctor had defined; for he could not but think an operation which involved such a thorough plugging of the cervix with cotton, that must be kept constantly in place until borne away by suppuration, to prevent the possibility of hæmorrhage, was a harsher treatment of dysmenorrhœa than the surgery of twenty years hence would warrant. He had seen severe dysmenorrhœa yield to much simpler methods, where the patients had shrunk from operation. One case, which he recalled, was entirely relieved by the use of a series of sounds fitted to slide one upon another, beginning with a very slender one, so as gradually to blunt the sensibility of the cervix until the dilatation was complete. For nine years the woman had had no trouble. He had under observation a patient who had suffered from dysmenorrhœa in times gone by, and had been treated abroad with potassa fusa and other applications, into whose cervix could hardly be passed Dr. Emmet's small uterine probe; and yet she had no longer any dysmenorrhœa. Another patient, strumous, anæmic, delicate, had not the slightest dysmenorrhœa; her catamenia were as regular and painless as possible; yet the cervix would not admit an applicator one-half the size of the flat instrument given to the profession by Dr. Emmet, even at the fortunate period of dilatation just after the menstrual flow. The only occasion for introducing such an instrument was to banish a slight occasional discharge of mucus, which the patient deemed annoying. She was sterile, and, years before, he had urged her to submit to division of the cervix on this account, as she was anxious for offspring; but she had not consented. The speaker submitted to Dr. Emmet that these cases showed that mere narrowing of the cervical canal did not of itself constitute a sufficient indication for incision; nor was it sufficient, when complicated with dysmenorrhœa, until other means had failed.

As to the supervention of fatty degeneration of the uterus upon amputation of the cervix, Dr. Elliot agreed with Dr. Taylor. It seemed very strange that one man should have collected statistics of so many cases of such a result, when we had no account of it elsewhere. He recollected a patient of Dr. Simpson's, who, ten months after amputation of the cervix, was well delivered of a healthy child, and did well subsequently.

As regarded displacements, the distinction drawn by Dr. Emmet between retroversion and retroflexion was obviously founded upon sound anatomical principles. The latter was the law, the former the exception. Retroversion was apt to be the result of accident; and, if the uterus retained its malposition, it was in one of two conditions: either it was normal, or it had suffered proliferation of its areolar tissue, was hard and heavy, and was in the initial stage of inflammation and of retroflexion. Except the cases where retroflexion was produced by pressure of the superincumbent viscera; except the cases where the posterior wall of the cervix was not so heavy as to draw the fundus down; except the cases where the posterior wall of the vagina was shorter than it should be; except the cases of faulty obliquity of the pelvis, where the angle formed by the plane of the spinal column with that of the brim was faulty and the os pubis was drawn up; except also the cases where loss of tone of the round ligaments was primarily at fault—and you would still have a large group of cases in which the first tendency to retroflexion was, the speaker believed, purely accidental, determined by one or more of various causes, for instance, coitus, or straining at stool. It was his absolute conviction that the initial lesion was, in the great majority of these cases, the displacement itself. And such a retroflexion, just like a retroversion, might pass off, in many patients, without attracting attention. These cases occurred in married women. What was the result? The fundus uteri was drawn down into the Douglas cul de sac, just where it would receive the blows of the penis in coitus, just where it would be pressed upon by scybala in the rectum. Of course, inflammatory symptoms were soon produced, and he believed that this order of sequence was much more frequent than that in which the inflammation was the cause of the displacement.

The rules for the treatment of retroflexion, under these circumstances, had been formulated by Dr. Peaslee, in exactly the words he would himself have used. The abuse of pessaries was certainly no argument against their proper use, although this abuse had deserved all the execrations that had been showered upon it. If the vagina was long enough for the pessary to press properly above the point of flexion; if the fundus uteri was drawn well forward; if the ovaries had not been dragged down into the cul de sac; and if the instrument did not press too hard upon the vagina—then, that the pessary was capable of doing a deal of good, it would be absurd to deny; if used without regard to every one of these precautions, it might do very great harm.

Dr. Jacobi.—Most of the gentlemen who have spoken here to-night are liable, from their great practice among uterine diseases, to run certain methods of treatment into the ground. Now, I am only a general practitioner. Were any one to tell me that pneumonia is safely treated with tincture of veratrum, I should say yes. Another would say that the veratrum would run not the disease but the patient into the ground; and again I should say yes, but when administered after quite another fashion. Now, if the nitrate of silver is used properly, you will get no cicatrix, but if you run your stick into the cervix uteri you will have a cicatrix. So one man praises and another blames the nitrate, and both are right.

There is one other point I would speak of. The condition of an organ, in a given case, may not be the proper condition for the age or the station in life of the subject. For example, we know that we have organs of great use in fœtal and infantile life, which after a while either disappear entirely or become atrophied, because their function is over. The large liver of the fœtus and the thymus-gland are illustrations of the fact that what is the normal condition at one age may be abnormal at another. I have never found a uterus in the fœtus, or in the child up to seven years of age, that was not anteflected. Anteflexion is the normal condition of young life; but later it becomes an abnormal condition, simply because it renders impregnation, in many cases, impossible. The change to the adult condition is effected, not by changes in the organ itself, but by changes in its neighborhood. In the infant, if the bladder is empty, the uterus is anteflected; if the bladder is full, it is straight. In adult life, after the organs have grown, the uterus is kept up. And thus it may be that, when the pelvis is normal, and the bladder large, the uterus is kept up at the age of thirteen or fifteen. It is then straight, and in advanced life it is a little retroflected. I believe that, whenever the pelvis is rachitic, the uterus cannot be anteflected in later life. It appears to me that this mode of development of anteflexion must be assumed to be the constant one in unmarried women. In married women it is different. It is not always dependent upon peritonitis and adhesions. Without these, the uterus is anteflected after confinement. A number of these cases which I have seen have been those in which there was an enlargement of the body of the organ. The uterus, remaining enlarged after confinement, and in the position normal for it immediately after confinement, continues anteflected. Now, those cases where the infantile condition is maintained, and those where the uterus is maintained anteflected after confinement—both these classes of cases ought to get well under pessaries. Only those where the uterus is bound down by adhesions would suffer from pessaries.

I believe there was a little misunderstanding as to fatty degenerations taking place after amputation of the cervix. I think that Dr. Noeggerath did not mean to say that the normal uterus would undergo fatty degeneration after such amputation, but that the hypertrophied tissue in chronic metritis would undergo what might almost be called the normal physiological process of absorption by fatty degeneration.

Dr. Noeggerath explained that he had not made use of the expression "fatty degeneration," but had spoken of the fatty *involution* of the hypertrophied organ.

The meeting then adjourned.

Bibliographical and Literary Notes.

This book[1] is a report, revised by the author, of twelve clinical lectures on the "Diseases of the Urinary Organs," in which may be found the pith of the whole subject, and especially of his own views and practice.

Its style is conversational, as it should be, but it is not loose. With great ease and simplicity of expression, the reader is decoyed into sudden discoveries of great practical lessons in diagnosis and treatment, his interest in each page increasing to fascination.

Its method is felt more than seen, and is so logical that one has no choice but to accept the conclusions as inevitable.

In the lecture on Diagnosis, four questions are given, which are as simple and cardinal as the four points of the compass, but which cover the ground entirely of all urinary diseases.

The first is respecting Frequency of Micturition; the second concerns Pain—when, where, etc.; the third respecting Quality of the Urine; and the fourth respects the Passing of Blood. These are questions easily remembered, and with their subordinate inquiries, under their respective heads, suffice to complete a diagnosis in every case.

Sir Henry Thompson finds the endoscope of no practical service to himself, for, having never been able to see by its aid the veru montanum, he would expect little use from it in the detection of points too obscure to be recognized by other means.

---

[1] Clinical Lectures on Diseases of the Urinary Organs, delivered at University College Hospital, by Sir Henry Thompson, Surgeon-extraordinary to H. M. the King of the Belgians, Professor of Clinical Surgery, and Surgeon to University College Hospital, with Illustrations. Philadelphia: Henry C. Lea. 1868. 8vo.

In the lecture upon Stricture we find a unique and excellent description of the urethra; one much better as a guide in the passage of bougies than we have seen in any book on anatomy. For stricture, when within three inches of the meatus, the author prefers internal urethrotomy. When farther down, he prefers dilatation, or continuous dilatation, but, should this not suffice, then he recommends resort to over-distention, and, next in order, to internal urethrotomy. Over-distention, as he calls it, is effected by the separation from each other, after introduction, of the two halves of a sound split down its middle, which is done gradually, and just where and as much as it may be required, by means of an internal rod and levers worked with a screw. He claims for it all the advantages of Holt's method of sudden rupture of the stricture, without its violence and attendant risk.

The most valuable part of the book is that devoted to Lithotrity, in which, for experience, skill, and success, the author is without a rival.

In comparing lithotrity with lithotomy, his views are briefly these:

Lithotrity is the best treatment for all cases whatever, above the age of puberty, in which the stone, whatever its quality, is not more than an inch in diameter.

Lithotomy is best for most cases under puberty.

But, seeing that, with proper skill, every case of stone may be detected before it has increased to an inch in diameter, the author says, "We shall live to see cutting for stone one of the rarest operations."

In the rules laid down for the operation of lithotrity, much stress is laid upon the shape of the instruments used, and the after-treatment; the stone should be crushed very finely, and the patient should not be allowed to urinate standing for some time after the operation, so that the fragments may become "water-worn," and may not become impacted in the urethra during their subsequent exit.

A PART of the lectures contained in this volume[1] have already appeared in the columns of the *Lancet*, and we took occasion, as they were passing through the press, to call the attention of our readers to them, and to speak of their value, with especial reference to the matter of differential diagnosis of diseases and tumors of the liver.

As the book now stands, it comprises a course of twelve lectures originally delivered to the students of the Middlesex Hospital. Of these lectures, only four have appeared in the *Lancet*. So that the reader, relying on our former announcement, would be mistaken if he expected to find the series complete in the journal to which we have alluded.

Six lectures are devoted to a consideration of enlargements of the liver, and embrace all the known conditions which may cause hypertrophy of this organ. The next lecture is devoted to the contractions of the liver. In the following three the subject of jaundice is discussed at full length. Then comes a chapter on fluid in the peritonæum, detailing all the causes of this condition, and, finally, the book closes with a chapter on hepatic pain and the pathological conditions of the gall bladder. Each one of these subjects is treated of with marked distinctness and conciseness, and the especial value of the book rests in the clearness with which the differential diagnosis is mapped out in all the known forms of diseases. The points made by the author are fully substantiated by the introduction of ninety-six well defined cases which have come under his own observation. Many of these cases were presented to the class at the time of the lectures, and formed, as it were, the text on which the lectures were based. They not only serve a good purpose in thus illustrating our author's text, but, from the completeness of the record, they will be serviceable to the practitioner who may meet with others of a similar nature.

We commend the book most heartily to our readers, and congratulate the American publishers on the good they have done by bringing this book within reach of the profession in this country.

[1] Clinical Lectures on Diseases of the Liver, Jaundice, and Abdominal Dropsy. By Charles Murchison, M. D., F. R. S., etc. New York: Wm. Wood & Co. 1868. 8vo., pp. 586.

It is so short a time since we gave a full review of the first edition of this book,[1] that we deem it only necessary now to call attention to the second appearance of the work. Its success has been remarkable, and we can only congratulate the author on the brilliant reception his book has received. In his preface he says: "The first edition was so large, that he reasonably anticipated ample time for the preparation of a second; and when, within six months after its publication, he was called upon to revise it for the press, the call found him unprepared, and the labor thus unexpectedly undertaken has had to be performed under the pressure of excessive professional duties. Even under these adverse circumstances, the author hopes that many imperfections have been removed, and that material of some value has been introduced." An entire chapter on chlorosis has been added, and the whole book has undergone careful revision, and we venture to express our very decided belief that the author will not find himself disappointed in the modest hope which he expresses that the work is rendered more worthy of the favor with which it has already been received.

This unpretentious little volume[2] seems very well adapted to fulfil its object—that of affording to students, briefly and clearly, a certain knowledge of skin-diseases. The author wastes few words, but goes directly to his work, intending that it shall be concise and useful. He ignores, by design, all skin diseases which are not common in England. He decides (for the student) all disputed points at once, laying down the law in black and white. He follows (of course, being an Englishman) in the footsteps of his great forefather, Willan, and ignores all mention of the natural classification, except where he employs it to construct his class Syphilida. The greater part of the later views on animal and vegetable parasites, and the diseases of the skin to which they give rise, has been adopted by the author. The suggestions in regard to treatment are excellent, and are all the student can require, although some exception might be taken to the chapter on the treatment of the syphilida, and to the slight efficacy which is allowed to arsenic, no matter how, when, or for what administered. The classification adopted by the author is of the most simple, and yet practically a fair one. It consists of the eight classes of Willan, to which have been added only four; syphilida, sebaceous diseases, animal parasite diseases, and vegetable parasite diseases. To the beginner this little volume will prove invaluable as a starting-point.

---

[1] A Practical Treatise on the Diseases of Women. By T. Gaillard Thomas, M. D., Professor of Obstetrics and the Diseases of Women and Children in the College of Physicians and Surgeons, New York, etc., etc. Second edition. Revised and enlarged. Philadelphia: Henry C. Lea. 1869. 8vo., pp. 647.

[2] A Manual of the Diseases of the Skin. By Balmano Squire, M. B., F. L. S. Churchill & Sons, London.

A NEW edition of Erichsen's Surgery, greatly enlarged and thoroughly remodelled, has just appeared from the press of James Walton, London.

DR. MATHEWS DUNCAN, of Edinburgh, has just published a new work on Perimetritis and Parametritis.

A MONTHLY Microscopical Journal has been started in London, under the patronage of the Royal Microscopical Society.

THE third volume of Owen's Comparative Anatomy, lately published by the Lippincotts, completes the work. The first volume treats of fishes and reptiles; the second of birds and mammals; and the third of mammals, including man. The three volumes contain nearly fifteen hundred illustrations, and the work is probably the most thorough and elaborate treatise on this subject which has ever appeared in any language.

BOSTON MEDICAL AND SURGICAL JOURNAL.—This venerable as well as valuable journal has just entered upon its eightieth volume with a change of editors. Drs. Cheever and Wadsworth, compelled by pressure of other engagements, retire, and are succeeded by Drs. Luther Parks, Jr., and David F. Lincoln. In this change we have every assurance that the journal will continue to be conducted with the same ability which has so long characterized it. Both these last-mentioned gentlemen have been frequent contributors to the Journal, and are already favorably known to the profession.

Rankin's Half-Yearly Abstract and Braithwaite's Retrospect for the last half year (both the English and American editions) come to us filled with their usually choice selections from the current medical literature. These journals are invaluable to one who is unable to command the leading medical periodicals of the day, for pretty much every thing of decided importance will be here found. We are pleased to see that American literature is not overlooked in the work of collation. Our own pages have been freely used in making up their table of contents. The tendency until quite recently has been rather to pass us by unnoticed; and for one we are not willing to admit that every improvement and advance in medical science comes from our Transatlantic co-laborers. The American edition of these two journals is within the means of every one; but the English editions are issued in more compact form and are neatly bound, making a very handsome volume.

Messrs. MacMillan & Co., of London, have just issued, under the title of "Medicine in Modern Times," the addresses delivered at the late meeting of the British Medical Association at Oxford. These addresses were by Dr. Stokes, Dr. Acland, Professor Rolleston, Rev. Professor Haughton, and Dr. Gull. Appended we find Dr. J. Hughes Bennet's report on the Action of Mercury on the Biliary Secretion, which has attracted so much attention recently. The whole forms a very readable volume, and is a valuable contribution to our medical literature.

One of the best of the French medical journals, *La Gazette Médicale de Lyon*, which has for some years past been edited by the syphiliographer, Diday, was, at the beginning of the year, fused with the *Journal de Médecine de Lyon*, and will be published hereafter under the name of *Lyon Médical*. The editorial duties will be divided among a committee of eminent medical men of that town.

Henry C. Lea, of Philadelphia, announces "The Royal College of Physicians' Nomenclature of Diseases." In a notice of the last edition of Aitken's Practice (see Journal for December, 1868, p. 307), we have commented on the importance of this new nomenclature and the probable effect it must have on the present systems of registration of diseases. By the same house we see announced a reprint of Pavy on "Digestion" and on "Food."

Dr. E. R. Hun, of Albany, has published, through the house of J. Munsell, his paper on *Trichina Spiralis*, which was originally read before the Albany Institute of Medicine in January last. The paper is a valuable summary of our existing knowledge on this subject, and is based upon several cases which occurred under the author's own observation.

Books and Pamphlets Received.—"Questions in Anatomy for the Use of Students." By C. L. Ford, M. D., Professor of Anatomy and Physiology in the University of Michigan. Pamphlet; pp. 64. From the Author.

These questions, embracing the whole range of anatomy, both descriptive and surgical, are prepared with the special purpose of giving a practical direction to the labor of the student in his acquisition of knowledge. No answers are appended to the questions, and the manual is not designed to supersede the use of text-books, but, on the contrary, it compels the most profitable use of them. It will be found eminently serviceable to the student.

"Report on Provision for the Chronic Insane." By John B. Chapin, M. D. Reprint from the Transactions of the American Medical Association for 1868. Pamphlet; pp. 17. From the Author.

"Catalogue of the Officers and Students of the University of Michigan for 1868–'69, with a General Description of the University." Pamphlet; pp. 79.

From this catalogue we learn that the number of students in the Department of Medicine and Surgery for the present year is 358, against 418 for the previous year. We have previously had occasion to refer to this falling off, which is not attributable to the Homœopathic controversy which has so deeply agitated the government of this noble institution.

"Twenty-sixth Annual Report of the Managers of the State Lunatic Asylum, New York, for the year 1868." Pamphlet; pp. 48.

The announcement is made in the foreign journals that Professor Skoda, of Vienna, is affected with an organic disease which must soon prove fatal.

Reports on the Progress of Medicine.

SURGERY.

1.—*Artificial Anus: Operation and Cure in two Cases, by Liotard's Method.* [L'Événement Médicale, January 11, 1868.]

Mr. Verneuil, on the part of Mr. Patry (of Saint Mause), reported to the Imperial Society of Surgery (meeting of December 11th) two cases of artificial anus cured by the suture.

In the first case, that of a child of eight months, the abnormal anus was the result of strangulation of the intestine included in the ligature of the umbilical cord, which was tied very close to the abdomen by an inexperienced woman. After the ligature the child cried much, became restless, was seized with vomiting, and suffered from constipation and meteorism. These symptoms lasted four or five days, and ceased at the fall of the ligature, which left behind an opening giving issue to a large quantity of greenish fluid, much to the relief of the little sufferer. When Mr. Patry first saw the child it was three months old; though it nursed with great avidity, it was emaciated. The umbilical opening was of a size to permit the introduction of an ordinary female catheter, and was surrounded by a pouting border of reddish mucous membrane, which was easily reducible. The surrounding skin was red. According to the mother's statement, this opening gave issue to fæcal matter similar to that which passed by the anus. When this opening was closed by a pad, all the fæces passed out by the anus. After having satisfied himself, in thus closing the umbilical opening, that the fæcal matter traversed the whole intestinal track without provoking any grave symptoms, and that it all passed off by the anus, Mr. Patry tried to obtain a radical cure of the case. The treatment consisted at first of cauterization aided by compression, and was continued for about two months, but completely failed. Mr. Patry then concluded to use the suture. Accordingly, on the 15th of March, he made a circular incision, involving the skin and subcutaneous connective tissue, so as to enable him to detach the mucous border, taking great care to avoid the peritonæum. This first step accomplished, he inverted as deeply as possible the pouting mucous membrane, and brought in contact the freshly-cut surfaces, and secured them in position by means of two points of twisted suture. The remaining raw surface was simply coated with cerate and the dressings retained by a body bandage.

The case progressed favorably, and on the 23d of March, the eighth day after the operation, the pins and threads were removed and the wound found completely cicatrized. The child had meanwhile been free from colicky pains or intestinal obstruction. Instead of the usual retraction, the umbilicus presented a prominence.

Mr. Patry's second case was that of a woman fifty-four years of age. The artificial anus was here the result of strangulated femoral hernia. Gangrene had supervened and had involved both a mass of omentum, of which the greater part of the protrusion consisted, and a portion of the circumference of a knuckle of small intestine. On opening the sac there flowed a quantity of fluid fæces, from an irregular opening in the intestine. The sloughy omentum was excised, then the gut was stitched to the edges of the cutaneous wound.

Two months after the operation the patient was able to perform her usual duties; though she was afflicted with an artificial anus, her bowels were regular and she seldom suffered from colic. It was ascertained, by exploration with the little finger, that the two ends of the intestine were continuous and uninterrupted by any spur. The opening gives exit to yellowish soft fæcal matter. Mr. Patry endeavored to effect a cure by means of repeated cauterizations and compression. This plan of treatment proved fruitless after more than one month's trial. Five months after the herniotomy, the artificial anus was surrounded with a prominent pouting mucous border, a little elongated in the direction of the groin.

Satisfied that both ends of the intestine were in free communication, Mr. Patry determined to try a second time the process which had succeeded so well in the first case.

The steps of this operation were similar to those of the first, and he closed the opening also with twisted sutures. There was no febrile reaction. The case progressed favorably, and experienced but slight diarrhœa and colic. The pins were removed on the eighth day, and a few days after this the threads fell off. The orifice was then completely closed, and shortly afterward the external wound cicatrized.

A year subsequently Mr. P. saw the patient, and found her in perfect health, wearing a truss to guard against further trouble.

This operative procedure, twice successful in the hands of Mr. Patry, failed in those of its inventor, Mr. Liotard, in 1819. A cure may thus be expected whenever there is free communication between the two ends of the intestine.

2.—*Spontaneous Cure of an Artificial Anus, resulting from Sloughing, caused by the Pressure of a Truss.* By J. L. Whipple, M. D. [St. Louis Medical Reporter.]

The case was one of femoral hernia in a woman, thirty-four years of age, which became strangulated, but was reduced by taxis. The hernia was easily kept back by a truss, but the patient, in adjusting the instrument, unwittingly brought the pressure of the instrument to bear on the knuckle or intestine which had descended, and in this manner it was kept applied for twenty-four hours. Sloughing and artificial anus followed—which closed spontaneously, without interference by treatment, except cleanliness of dressings and absolute rest, in thirty-five days from the rupture of the sac.

Another case of a somewhat similar nature to the above is reported in the *Lancet* of August 15, by Dr. A. J. Mackintosh. The patient, a woman forty-eight years of age, and the mother of thirteen children, was the subject of double oblique inguinal hernia. That on the left side became strangulated, and, as every effort to reduce it proved futile, an operation was resorted to. Dr. M., who saw the patient for the first time on the day of the operation, found the skin and investing textures of the hernia closely agglutinated into one solid mass, so adherent to the sac that it was impossible to separate them even by most careful dissection. He also found that he had made three small perforations into the hernia, through which fæcal matter escaped; and moreover, the surrounding tissues were infiltrated with the matter, indicating that the intestine was more or less destroyed. There was then no alternative but to lay the three openings into one, thereby constituting an artificial anus. During the first twenty-four hours after the operation, immense quantities of fæcal matter were passed through the wound, and for the following week there was a daily motion through the same channel, unattended with very great pain.

The remainder of the report we give in the Doctor's own words:

On the 13th of April (a week after the operation) I was surprised, on calling in the morning, when she informed me that during the previous night she endured severe pain in the lower part of the abdomen, and that she had a natural motion per rectum just one hour before my visit. She described that motion as "resembling a lot of marbles." I doubted the accuracy of her statements, and questioned the nurse, to elicit the truthfulness of her remarks, and, to my no small astonishment, I found that she corroborated her assertions. At the time, I believed that the peristaltic action of the intestines was restored, and that the contents evacuated were merely lodged in the anal side of the hernia. However, the sequence will show that other important changes occurred besides what I surmised.

On the 23d of April she had a large motion per rectum, causing little or no pain. At the same time motions were passing daily through the artificial opening.

On the 1st of May she had another free evacuation through the natural passage, and, strange to say, since that date she had daily motions through the natural channel.

When the function of the normal passage was fairly restored, the artificial wound gradually closed, and is now completely obliterated, devoid of either discharge or secretion, a little induration and a cicatrix representing the former situation of a hernia and an artificial anus. The patient is now attending to her domestic duties, absolutely free from any pain or suffering. She wears a truss over the hernia on the right side.

I cannot explain the peculiar change that occurred in this very singular and unique case after the operation, except on one hypothesis—that is, that the front half of the strangulated portion of the intestine was destroyed, permitting fæcal matter to escape through it, the other or posterior half being entire and healthy, allowing certain quantities of matter to pass through it also; thereby keeping the calibre of the canal patent, while the greater amount was carried off by the other opening.

It is evident that nature repaired the injured parts most beautifully and successfully by patching the wound with false membranes and adhesions. When this woman dies, a *post-mortem* examination would disclose very curious and interesting facts in her case. It would be highly satisfactory to ascertain the primary state, and amount of mischief to the various parts that were involved by the hernia; also the manner in which Nature healed the wound and kept the intestinal canal open. The exquisite powers of Nature are truly wonderful in protecting and saving life in cases that appear beyond hope of recovery.

3.—*Final History of a Case of Severe Injury of the Brain.* [New York Medical Record, Sept. 15, 1868.]

This case was originally reported in the *American Journal of the Medical Sciences*, for July, 1850. The accident happened in Vermont, in September, 1848. The patient, a man 25 years of age, had a pointed iron bar, used for a "tamping-iron," three feet and a half in length, and one inch and a quarter in diameter, driven through his head by the premature blasting of a rock. The bar entered the left side of the face, just in front of the angle of the jaw, and passed obliquely upward, inside the zygomatic arch, and through the anterior part of the cranial cavity, emerging from the top of the frontal bone on the median line, just in front of the point of union of the coronal and sagittal sutures. The patient was at first stunned, but soon recovered himself so far as to be able to converse intelligibly, rode home in a common cart, and with a little assistance walked upstairs to his room. He became delirious within two days after the accident, and subsequently remained partly delirious and partly comatose for about three weeks. He then began to improve, and, at the end of rather more than two months from the date of the injury, was able to walk about. At the end of sixteen months he was in perfect health, with the wounds healed, and with the mental and bodily functions unimpaired, except that sight was permanently lost in the eye of the injured side.

It now appears that he subsequently removed from Vermont, and, after living in several different places, went to San Francisco in 1859. In 1861, he was attacked with epilepsy, and died in May of the same year, twelve years and a half after the receipt of the injury. His skull was procured, and presented to the Warren Museum of Harvard College.

4.—*Operation for Strangulated Hernia in a Patient* 82 *years of age. Recovery.* By P. L. Greenleaf, M. D. [Med. and Surg. Reporter, Sept. 19, 1868.]

May 1, 1868, evening.—Was called to see Mr. R., aged 82 years, suffering from oblique inguinal hernia of both sides, of long standing—his present suffering referred to the right side.

On examination, found hernia of that side irreducible, very large and incompressible; that of left side reducible, also very large; both extending into and distending scrotum enormously.

Patient complained of flatulence, colicky pains, sense of tightness across the abdomen, which symptoms had existed for seventy-two hours, with anxiety of countenance and fetid eructations, evidently premonitory of stercoraceous vomiting. Diagnosis, strangulated hernia of the right side. The patient was also laboring under valvular disease of the heart, with irregularity of the heart's action, though of a bilious temperament, strong nervous system and remarkable muscular vigor.

The taxis was employed, but to no avail. Blood-letting was thought of, but without promise of much good—all other measures for its reduction being deemed useless, I decided to operate.

On visiting my patient the next day for that purpose, accompanied by Dr. L. E. Atkinson, I found all the symptoms increased—some vomiting of fæcal matter, and, without an operation, no hope of prolonging life. The consent of the patient being obtained, the operation was performed as follows:

An incision five inches in length was made immediately over the course of the tumor, and extending as high as the lower border of the internal abdominal ring—each layer of the covering was taken up and divided separately upon a grooved director, and the sac exposed; an attempt was now made to reduce a portion of the strangulated gut, but without avail. Sac was laid open and divided upon a director, when a quantity of serum escaped, to some extent reducing the size of the tumor and rendering manipulation more easy. I now discovered the seat of the strangulation as being at the external ring, caused by the fibres of the internal oblique muscle. I also found the old hernia to be omental, considerably indurated, thickened, and forming adhesions to the sac, the stricture grasped a loop of intestine recently escaped from the abdomen, and which was found considerably discolored, evidently the cause of the whole train of symptoms.

After several futile attempts to dilate with the fingers, I introduced a probe-pointed bistoury, with index-finger as a guide, and divided the stricture by cutting upward to avoid wounding the epigastric artery, and returned the strangulated gut, but made no attempt to restore the old protrusion, on account of its extensive adhesions. The wound was closed by six silver-wire interrupted sutures, supported by strips of emplastrum adhesivum, which with compress and bandage completed the operation. Very little hæmorrhage occurred during the operation, probably a half an ounce at the most.

Patient rallied from the effects of anæsthetics, after voiding contents of stomach *per orem.* The operation and anæsthesia lasted one hour and twenty minutes—it would be proper to remark that the patient could not be fully ætherized, on account of the condition of the heart, as above stated.

After-treatment was tinct. aconiti rad. gtt. vj. every six hours, to control the circulation; opium gr. j. twice a day, to allay pain—restricted to mild diet, whey and game broth.

There was no natural passage from the bowels for eight days, when an injection was administered, per rectum, and a large quantity of hard fæcal matter was voided, after which the alvine evacuations occurred regularly.

The wound healed mainly by first intention; not a single untoward symptom manifested itself during the after-treatment, and at the end of three weeks he was able to sit up and wear a truss to support the inguinal region. The patient is now in his usual health, and has experienced no trouble, referable to his hernia, since the operation, and considers himself quite well.

In this connection we may refer to another cure reported by Mr. Holmes Coote, in the British Medical Journal for September 19, 1868. In this case the patient was 89 years of age.

She was admitted into St. Bartholomew's Hospital, August 3d, suffering from strangulated femoral hernia of the right side. She said that she had had a rupture since she was twenty-five years old, but had been always able to return it easily, until the previous day (August 2d) at 4 P. M. She first went to a surgeon, who employed the taxis, but without avail, for above an hour and a half, after which she went home, but passed an uneasy night. She came to the hospital about 11 A. M., August 3d; when, the symptoms of strangulation being evident, the operation was performed at 1 P. M. A fair attempt at reduction having first been made, the patient was rendered insensible by chloroform. The shape and situation of the tumor were somewhat different from those of an ordinary femoral hernia; it was more pyriform, and nearer than usual to the external inguinal ring. Mr. Coote made an incision along the inner margin of the tumor, and dissected down to Gimbernat's ligament. First, some of the fibres of the saphenous opening were divided; then some of those of Gimbernat's ligament, when the protruded mass was readily replaced, the hernial sac remaining entire; a proper bandage was applied, and the patient sent back to bed. She was ordered six ounces of brandy daily, half-a-pint of essence of beef, and such nutritious food as she could enjoy. The bowels were relieved the following day. No unfavorable symptoms supervened, and on August 17th no symptoms referable to the hernia remained.

5.—*Fistulous Communication with the Kidney in the Lumbar Region, and Discharge of several Calculi therefrom.* By Mr. Morgan, F. R. C. S. I., Surgeon to Mercers' Hospital. [Dublin Med. Press and Cir.]

W. C., aged 17, messenger, admitted to Mercers' Hospital September 11, 1868, complaining of symptoms of calculus in the bladder, and much irritability of urination. Has had a venereal sore and double suppurating buboes during the last three months, and is in a cachectic condition. He gives the following history: About seven years ago he got a fall, and in consequence a swelling "like a red lump" formed in the left lumbar region, for which he was admitted to hospital. This swelling increased, and after some months gave way, and about a quart of matter made its escape. He was discharged from hospital much relieved, but with the fistulous opening continuing; from time to time small calculi have made their way through this fistulous track. At least six in number have passed. There is no stone to be felt in the bladder, after the most careful exploration, but at the loin the fistulous opening, with a puckering of the skin, is to be seen, and on passing in a probe it passes upward and toward the spine. On cautious examination, a rough calculus is to be felt, deeply seated. There is no great uneasiness, and the chief inconvenience is caused by the discharge, which is, however, not in sufficient quantity to be collected to any practical amount. Its reaction is acid, and, on microscopical examination, appears to be pus and urine. There a few tube casts to be seen in it. On September 15, 1868, I with some difficulty extracted a small calculus which was lodged about one inch from the surface. It is rough and hard, the size of a small bean, longer than round.

The boy had been lithotomized nine years since by Mr. Bevan, and a large-sized stone removed. Mr. Bevan has also a calculus in his possession, the size of a large marble, extracted from the fistulous opening about four years ago.

6.—*Amputation at Hip-Joint.* By T. D. Johnson, M. D. [Pacific Med. and Surg. Journal, December, 1868.]

In the month of July, 1862, I was called, in consultation with Dr. McDougal, of San Juan, Monterey County, to visit a man who had received a gunshot wound two days previously, from a Colt's revolver. The ball had penetrated the hip at the superior portion of the trochanter major, passing down the medullary cavity to near the knee-joint, completely destroying the entire shaft of the bone and making it necessary to amputate.

The flaps were formed antero-posteriorly; the arteries were secured without the loss of one pint of blood; the amount of chloroform administered was six drachms; a great portion of the stump healed by first intention. The patient recovered rapidly, after the first ten days, for about two weeks, when he was accidentally poisoned, through a mistake of the nurse in giving a large portion of volatile liniment in place of castor-oil emulsion. This retarded his recovery considerably, but in three months he was entirely well, and is still living, and resides at the New Almaden mine, in Santa Clara County.

7.—*Forcible Dilatation of Urethra.* [Med. Times and Gaz., November 7, 1868.]

On the occasion of M. Ricord's laying before the Academy of Medicine of Paris, in the name of its inventor, a new "divulsor" for the treatment of stricture of the urethra, M. Chassaignac expressed his surprise at the indulgence shown toward such instruments, calculated to exert violence on the urethra. These plans of treatment are always revived every few years with the same hopes, to be followed by the same disappointments. For his part, he protested, in the name of true surgery, against these panaceas for stricture, and he thought that M. Ricord should rather strive against their introduction than admit them from mere complaisance to their inventors. One author states that he has cured in this way 550 strictures, while hospital surgeons in the highest repute do not see a tenth of this number. All these sudden violences done to the urethra are dangerous, and resort to them is the more unjustifiable because strictures are so easily and effectually treated by slow and progressive dilatation. It is only in those very rare instances in which a bougie of the smallest size cannot be introduced, and where it has become necessary to empty the bladder, that such dangerous procedures should be allowed. M. Ricord, so far from objecting to M. Chassaignac's remarks, stated that he quite agreed in their justice. He merely presented the instrument out of politeness to the inventor. He had never tried it, and would fear to use it; yet to Mr. Holt's success in this kind of procedure we must add that of M. Voillemier and others. It must resemble the *coup de marteau* employed by Heurteloup, which, in a case to which M. Ricord was called, was followed by dangerous hæmorrhage.

8.—*The Examination of the Bladder.* By J. Matthews Duncan, M. D. [Edinburgh Med. Journal, March, 1868.]

Although the diseases of the bladder have been the subject of much observation and study, and much has been written concerning them, I am not aware that in any quarter the physical examination of the bladder is described with the care and fulness which it appears to me to deserve. I am satisfied that attention only requires to be called to it to secure for it the consideration it merits, forming, as it does, a valuable addition to our means of diagnosis, that may be available in many difficult cases.

No special instrument is required for the purpose. A rigid female catheter is scarcely long enough, but may suffice, especially if it is well closed by its stilet. I use a metallic vesical sound, that has, about one inch from its extremity, a curve which joins the two parts separated by it at an obtuse angle. The instrument must be rigid, so as to be pushed with a little force without yielding. Its point should be rounded and blunt, so that it may not easily injure the walls of the bladder, or cause pain in a healthy organ. It is convenient to give it a flat, button-like handle, and a total length of about twelve inches.

The conditions which this instrument, used by the fingers of a skilled practitioner, should discover or investigate are the following:

1. The tenderness of the bladder.
2. The length of the bladder.
3. The state of the walls in respect of softness or distensibility.

Each of these subjects will require some separate consideration. When the whole are correctly made out in any case, the results cannot fail to be of practical value to the practitioner who knows how to make use of them.

The operation of conducting this investigation must always be made with tenderness and care, and, in a case where much pain is anticipated, only after a decision, duly arrived at, and founded on a just appreciation of the features of the case, that the investigation will probably yield results justifying the infliction of the pain and alarm usually excited.

1. *The Tenderness of the Bladder.*

This tenderness must be, if necessary, distinguished from tenderness arising from pressure by the instrument on the neighboring inflamed parts. It is seldom difficult to do so; for, first of all, such inflamed parts can be previously and otherwise made out, and their position avoided in manipulating the instrument, or their presence allowed for; but, secondly, it is found in practice that even the compression of the bladder by neighboring inflamed masses does not prevent the careful examiner from investigating the state of the bladder without interferences from such sources of error. This last statement is often remarkably verified by the absence of vesical tenderness under such circumstances.

In cases of gonorrhœa, or in any others in which there is urethritis or urethral tenderness, a greater difficulty is introduced by this complication than by the former. For the pain of passing the instrument is great; if present, it anticipates the eliciting of vesical tenderness, and accompanies it when elicited; it causes expressions of pain even when vesical tenderness is absent, and the patient is generally too intent on her feelings to ubmit to questionings regarding any difference in locality of the urethral and of the vesical pains. But this difficulty is to a great extent overcome by remarking the great increase of pain produced in touching the vesical walls in such cases as those of gonorrhœal cystitis.

Catarrh, or irritability and inflammation of the bladder, are the conditions in which tenderness is always great, sometimes intense; every touch of its walls, every motion of the instrument, causing a cry of agony. This is what is naturally expected; and it is, I believe, invariably found. But it is not a rare occurrence to discover total, or nearly total, absence of tenderness in cases where catarrh or inflammation was believed to be present. In such instances, nothing can be much more important than to find the absence of tenderness. The diagnosis is corrected. The practitioner points his inquiries in a new direction, finds out the hidden seat of disease, or at least has a more accurate idea of the nature of the case under his care.

Cases illustrating this statement have frequently occurred in my practice.

It is only necessary to name the difficulty, often occurring in urinary cases, of deciding between the kidney and the bladder as the source of the symptoms, to show the valuable aid that may be acquired by ascertaining the state of the bladder as to tenderness and other conditions.

The healthy and many diseased bladders can be examined by the sound fully without any complaint of suffering being made, far less any cry of pain. It is needless to say that many women, easily frightened, can scarcely believe that they are not suffering when under the examination, and disquiet themselves greatly. On the other hand, I can say that I have often examined the bladder in women without their being aware that any thing had been done. I have been asked when I intended to begin, when the examination was already completed.

I have examined a bladder which had no notable sensitiveness, which was believed to be only compressed and slightly irritated by neighboring disease, but which was really the subject of cancer, having several large and bleeding projections in its interior. These were indistinctly felt; but the absence of pain on examination misled me as to the condition of this bladder. At that time I did not know that a bladder so extensively diseased and disorganized could be examined by the sound with so little suffering.

2. *The Length of the Bladder.*

By the length of the bladder, I mean the length of the sound which passes into it. I measure the length from the external orifice of the meatus urinarius; and, in giving measurements, I understand the point of the instrument applied to the top of bladder to be one extremity of the measured line, and the external orifice of the meatus urinarius to be the other limit. Of course, for anatomical exactness' sake, the length of the urethra should in every case be subtracted from the measurement. But, as in no case can the length of the passage be ascertained, I do not attempt to subtract it, and therefore give the whole length of bladder and urethra.

This length, besides its own immediate value, which I shall attempt to display, is also of use as contributing to an estimate of the capacity of the organ, a quality which it is very difficult justly to appreciate—for it is very erroneous to suppose that the quantity evacuated, when the bladder is said to be full, gives, in every case, a reliable measurement of the capacity of the organ. The quantity evacuated from a healthy bladder varies under a variety of circumstances, especially the condition of the retentive power of the abdomen. It is generally, like the air expelled in an expiration, only a certain overflow produced by vesical contraction and the bearing-down effort, and may be a greater or less amount, according to the intensity of these actions. Sometimes, even while there is a vesico-vaginal fistula of no small dimensions, and a relaxed vagina, a large quantity of water accumulates in the bladder. After delivery, it not rarely happens that, in a case of retention, the urine ceases to flow through the catheter when the recently-distended bladder is not half-emptied. At such a time, the cessation from the bearing-down which has half-emptied the bladder may lead to air regurgitating through the catheter into the bladder. The further emptying of the bladder, in such a case, is effected by continued powerful straining, or pressure by the hand on the brim of the pelvis substituted for it. It is not my purpose to discuss fully the measurement of the capacity of the bladder. I have said enough to show that the amount evacuated is not, in general, a reliable indication of capacity. I believe that, in cases of irritation and inflammation, it is more to be depended on than in health; but, in all cases, the length of the bladder will afford important aid in estimating the bulk of contents.

When a woman passes a large quantity of water at once, she must have a capacious bladder; but when a woman only and always passes a small quantity, that circumstance is in itself not sufficient to prove that her bladder is of contracted dimensions.

When, from so-called paralysis of the bladder, the urine is retained, the bladder assumes enormous dimensions. In such circumstances it is well known that, besides involuntary dribbling, the urine is in many cases passed at regular intervals, as in health, but in small and insufficient quantity. The circumstance of the bladder being habitually and naturally only partially emptied, which I now point out, occurs in cases both of health and disease. Partial emptying is itself no sign of disease, nor a sign of exaggerated capacity.

It is, then, necessary to keep in mind that it often happens that a woman is frequently micturating, and yet never nearly emptying the bladder. It is this circumstance that, in certain cases, especially those where the urine is decomposing in the bladder, gives great value to the operation of washing out the bladder; and the opposite condition of very complete evacuation sometimes renders the operation of washing unnecessary, and, it may be, injurious.

The healthy bladder cannot be measured as the uterus is, or as the hard, diseased bladder may be—for the sound on reaching the summit of the cavity meets, in a healthy organ, with a soft wall, which can be pushed away before its point, sometimes to the extent of an inch; but a healthy bladder, gently pressed by the sound, measures from five to six inches. The measurement cannot be more precisely given, on account of the distensibility just mentioned.

In cases of disease, the bladder is often found very greatly exceeding this length, as in retention. A young girl, not yet arrived at the age of puberty, had all her life wetted her bed involuntarily. At no time had she the natural feeling of desire to make water, and it was only by emptying of the bladder by straining that she avoided wetting herself in the daytime. Whether the theory of the case be right or not, the treatment founded on it was successful. The dimensions of the bladder were diminished, and its natural sensibility restored.

In ordinary cases of catarrh or inflammation of the bladder, examples are found of diminished length of the bladder, and a very common dimension is four inches. A case having a less measurement is surely a grave one on that account, and *vice versa;* a case having a measurement above four inches is, so far, a favorable one, inasmuch as cure will be more easily and more rapidly attained.

In cases of severe acute cystitis, the capacity of the bladder is sometimes entirely destroyed. There is naught but a potential cavity, or only one capable of containing a few drops of urine, which are soon expelled with acute pain. The sound cannot be passed further than the urethra, that is, about an inch. If, while the patient is under the influence of an anæsthetic, a moment of vesical relaxation is waited for, the sound will pass to the top of the bladder, entering little more than two inches.

In some cases of urinary calculus, the bladder has no capacity for urine, or only the very smallest, the stone filling completely the irritated organ.

In cases of inveterate chronic cystitis of the worst kind, I have found the bladder to measure little above two inches.

Besides indicating the actual state of the bladder at any given time, measurements at successive periods, showing increase or decrease of dimensions, are valuable and very reliable indications of gradual aggravation or amelioration of the cases. And this indication I have frequently availed myself of in practice, with great satisfaction.

3. *The state of the Walls in respect of Softness or Distensibility.*

Examination by the sound informs the surgeon as to the shape of the bladder. It sometimes also gives information regarding the condition of the walls as to smoothness or roughness, regularity or irregularity of surface. A bladder, the subject of malignant disease, may present nodosities on its surface, which may be more or less distinctly felt by the examiner. A bladder, the subject of chronic cystitis, may present an irregular surface, from the projections of bands of muscular fibres lying in various directions.

But a more generally discoverable quality of the walls of the bladder is their condition as to distensibility. The inflamed bladder soon becomes not only small but also hard or indistensible, and this condition can be appreciated by the sound. It is well marked in all cases of contracted bladder. It is remarkably absent in a healthy organ.

9.—*Artificial Anus: Repeated Operations; Peritonitis; Death.* Reported by Dr. Clark in Proceedings St. Louis Medical Society. [Humboldt Medical Archives, November, 1868.]

In June of this year, a German, aged forty-eight, was admitted into the City Hospital, having an artificial anus in the right groin. He had been operated upon in 1848 for strangulated hernia, and the operation resulted in the formation of an artificial anus, with the hernia protruding through the abdominal wall and presenting an opening sufficiently large to admit the end of the finger. This continued until 1864, when an effort was made by Dr. Hammer to close the opening, by cauterizing the edges of the fistula and drawing them together, by the continued suture, after the manner of the draw-string of a bag. This operation was twice attempted, and failed in both instances, the size of the opening being, however, somewhat diminished. When admitted, the opening was of sufficient size to admit the little finger, the hernia still protruding, and the fæcal matter constantly escaping. An effort was made to close the opening by paring its edges and uniting them by the interrupted suture. In forty-eight hours, however, the sutures cut out and left the opening somewhat larger than before. Three days afterward the operation was again attempted, by paring the edges, extending the dissection through the surrounding margin of skin, and uniting the walls of the cut surface by means of the quill suture. This prevented the escape of fæces for the next forty-eight hours, by which time the sutures again cut out. On the 15th of August, Dr. C., with Dr. Hodgen, in order to explore more fully the condition of the orifice, laid open the sac of the hernia by a free incision, an inch and a half in length. The opening into the intestine was found to be about the size of the middle finger, the upper or proximal half of its edges being adherent to, and continuous with, the abdominal walls, while the lower half was free and unconnected. An effort was now made to close the opening in the bowel, by dissecting back that portion of its margin adherent to the abdominal wall to the extent of an inch, and then paring the edges of the opening in the bowel and uniting them by the ordinary glover's suture. This being accomplished, the bowel was returned to the abdominal cavity, and a truss applied to the external opening, with instructions to the patient to lie constantly on his back. Up to the third day, the operation bid fair to be successful; nothing untoward had occurred, and no fæcal matter had escaped from the opening. At this time, however, contrary to orders, the patient got out of bed, removed the truss, and walked about the room, allowing the hernia again to protrude; and the distention of the bowel from the accumulation of fæcal matter again caused the cutting out of the sutures. These were reinserted as before, and the hernia with great difficulty returned to the abdomen; but the edges of the hernial opening had, by this time, become so friable, that the sutures again cut out on the second day, and fæcal matter reëscaped externally, the opening in the intestine being held in apposition to the abdominal opening. From the time that the patient got out of bed as described, he exhibited symptoms of peritonitis, not, however, of an alarming nature, but these continued to increase, and he died on the 30th of August. The *post-mortem* revealed considerable peritonitis, involving both intestine and omentum, and extending as far as the parietal peritonæum.

MATERIA MEDICA AND THERAPEUTICS.

1.—*Lactate of Zinc in Epilepsy.* [Humboldt Medical Archives, and Medical Press and Circular.]

Dr. Hart has tried this remedy in combination with belladonna, on 240 patients in the Western Lunatic Asylum of Kentucky, all of whom had been affected with epilepsy from three to six years. An improvement took place in all, and in no case did he use it without effectually controlling the paroxysm in from 24 to 48 hours. His formula was: ℞. Zinci lactatis, gr. xxx.; ext. belladonna, gr viii. M. ft. pil. x. Sig. One before each meal. It is a question which remains still to be decided, what is in fact the best remedy for this dreadful affection. The whole family of zinc salts and its oxide have, as well as the lactate, been highly recommended by different parties for curative virtues in convulsive nervous diseases. The sulphate, Dr. Babington had good success with in treating epilepsy, but the valerianate was considered the most effective of all the zincs in doses of one-half a grain raised gradually to three grains three times a day. The extract of belladonna is frequently united with the zinc in pill, and it may be supposed, from its general use, that it has some peculiar sedative action in convulsive disease. The bromides at present, however, seem to have the most popular and promising position.

2.—*Treatment of Hæmoptysis by Ergot of Rye.* By HORACE DOBELL, M. D. [British Medical Journal, June 27, 1868.]

In common with other physicians, who, like myself, are connected with hospitals for diseases of the chest, I see every year a large number of cases of severe pulmonary hæmorrhage resulting from a variety of causes.

There is scarcely any complaint that gives such serious alarm to the friends of a patient as profuse hæmoptysis; and there are few occasions on which a consultation is so urgently requested, and so readily granted by the family doctor, as when a patient appears to be "bleeding to death." But every medical man of experience considers himself perfectly qualified to treat hæmoptysis; and it is almost the rule, therefore, that, when called to these cases in consultation, one of the first remarks of the doctor in attendance is, that "every thing possible has been done, and every remedy tried, but in vain." It is assumed, in fact, that the only object of the consultation is to sanction the inevitable death of the patient. Yet, according to my experience, it is exceedingly rare for a patient to die of hæmoptysis. In these remarks, I confine myself to cases of pulmonary hæmorrhage due to tuberculous disease of the lungs, which make up the large majority of all cases of severe hæmoptysis.

I attribute the success of my practice in this respect mainly to the use of ergot of rye; because it is quite true, as already suggested, that, in nearly every consultation-case of appalling hæmoptysis that I have seen, "every thing has been done, and every remedy tried," with the one exception of ergot of rye; and the use of this remedy has generally turned the fate of the patient. It has always struck me as a singular fact, that general practitioners, who are so well acquainted with the effects of ergot in uterine hæmorrhage—who use it more frequently than any other class of practitioners—with whom, in fact, it is almost a "pocket-companion"—never seem to think of using it in pulmonary hæmorrhage. I find, from frequent inquiry of my medical friends, that this is explained by the prevalence of the idea that ergot only acts by inducing contractions of the muscular tissue of the uterus; its remarkable power of inducing contraction of the blood-vessels being lost sight of. This is so generally the case, that I never met with but one general practitioner in the London district (in the country, it seems to be better known) who was at all aware of the power of ergot to control hæmoptysis. This exception was Dr. Betts, formerly of Highgate, now of Ventnor, who has as much confidence in the remedy as I have myself, and dates his confidence from the occurrence that, when a student at Guy's Hospital many years ago, suffering from profuse and intractable pulmonary hæmorrhage, under the care of the late Dr. Addison, his case was on the point of being given up as hopeless, when the bleeding was suddenly brought to a stand-still by a large dose of ergot, administered at his own request; the idea having occurred to him, that, as it so often arrested uterine hæmorrhage, it might also answer in hæmoptysis.

But I have said that, in the appalling cases to which I have referred, "every thing else had been done, and every remedy tried," before I ordered the ergot; and I desire to attach the greatest importance to this fact. Ergot is only competent to do one of the many things necessary to stop a severe pulmonary hæmorrhage, viz., to contract the vessels. It is necessary to do much more than this:

1. The vital power must be supported by brandy, iced milk, and beef-tea, if indicated by the general symptoms.
2. The heart must be kept steady by digitalis.
3. Congestion must be relieved by saline purging.
4. Clotting of the blood must be promoted by styptics, and by the free admission of cold air.
5. The bleeding part must be kept at rest by position, by enforced silence, and by soothing the cough.

In spite, therefore, of the fashionable outcry against complicated prescriptions, I venture to give the following as the most efficacious, and, as it seems to me, the most rational, combination of remedies for a case of profuse tubercular pulmonary hæmorrhage. It has served me many a good turn, and I hope it may do the same for my professional brethren.

℞ Ext. ergotæ liq. ʒ ij (to contract the vessels); tincturæ digitalis ʒ ij (to steady the heart); acidi gallici ʒ j (to clot the blood); magn. sulphatis ʒ vj (to relieve congestion); acidi sulphurici diluti ʒ j (to assist the rest); infusi rosæ acidi ad ℥ viij (to make a mixture). A sixth part every three hours till hæmorrhage is arrested.

In any given case, either of the ingredients may be omitted, if the symptoms indicate that it is not required, or that it has already done its duty.

3.—*On the Action of Belladonna.* [Schmidt's Jahrbucher, August, 1868, and Medical Gazette, October 24, 1868.]

Delioux de Savignac thinks that it is an anodyne, anti-spasmodic, and quieting remedy, which acts especially on the sympathetic nerve. It both irritates and relaxes the muscles of the intestines, and thus facilitates evacuations; it promotes the discharge of bile by irritating the common duct; and hastens the discharge of gall-stones in gall-stone colic, by arousing the muscular action of the gall-ducts. Its action on the sphincters is not confined to the dilators alone, but also extends to the constrictors, and is not a relaxing one merely, or else it would cause incontinence in place of retention. But, on the contrary, it restores to the contractile viscera the power of relieving themselves of their contents in a normal way, inasmuch as it arouses an excitement in all their muscles. This peculiar action renders it so useful in incarcerated hernia, rigidity of the neck of the uterus, and in irregular and increased action of the heart; especially when applied in the form of an ointment or plaster.

The action of belladonna is both quieting and resolving; thus, when applied to swollen rheumatic joints, it both relieves the pains and diminishes the swelling. The same occurs when applied to swollen glands. If the ointment be put upon an open wound or sore, it irritates and may cause severe pain; still it acts quite differently from the epispastic and suppurant remedies, as it not only does not favor suppuration, but causes a rapid drying up of the discharge, and an increase of epithelial formation. We see a somewhat similar result from its internal action, when it causes dryness of the mouth and throat. It is supposed that its beneficial action in asthma arises not merely from relaxing spasm of the bronchi, but from the disturbed contractility of the small bronchi being restored to its normal character by a counter-irritant or exciting action.

It is supposed that nux vomica, stramonium, and lobelia have an action somewhat similar to that of belladonna, yet differing somewhat from each other. Thus nux vomica acts principally upon the motor fibres of the spinal marrow, and thus has a more general influence, while that of the other remedies and belladonna is confined to certain organic apparatuses and to the involuntary muscles. Secale is an exception to this generalization, as it seems to act in both directions.

Although Savignac insists that belladonna undoubtedly acts upon both the dilator and constrictor muscles, still he does not deny that it affects the former far more powerfully than the latter. In contraction of the limbs, it restores to the extensors (which correspond to the dilators) their normal power of contraction.

According to Brown-Séquard, its anæsthetic and pain-relieving properties depend upon an excitement of the vaso-motor nerves, and especially of those of the spine, in consequence of which an anæmic condition of the spine is produced, which causes a diminution of sensibility of the marrow. Still this mode of explanation does not apply in all cases, and we are at times obliged to infer that it exerts a direct influence upon the sensor nerves.

4.—*Valerian in the Treatment of Pertussis and Laryngismus Stridulus.* By GEORGE HILL, M. D. [British Medical Journal, April 11, 1868.]

In recommending a remedy in the treatment of whooping-cough, one almost feels as if an apology were due—so numerous are the medicines which have been prescribed, and so unsuccessful in their application. But I have recently had an excellent opportunity of testing the effects of various medicines in this obscure complaint, during an epidemic which has prevailed in this neighborhood for several months.

The chief indication to be fulfilled in the treatment of uncomplicated whooping-cough is to mitigate the severity of the symptoms due to the nervous system—to alleviate the spasm from which the disease has its name. For this object, I know of no medicine so efficacious as valerian. It were needless to cite examples illustrative of its beneficial effects: suffice it to say that, in almost every case in which I prescribed it, there was a marked diminution within eight-and-forty hours, not only in the frequency of the paroxysms, but in the severity of the spasmodic element. I have likewise used nitric acid with advantage; but it seems more suitable during the decline of the disease, when its good effects are to be ascribed to its general tonic properties, rather than to any specific action. The administration of prussic acid, alum, and cochineal, has been attended with no success. I was led to employ valerian in this disease by the success with which I have recently used it in laryngismus stridulus—a complaint in a certain degree analogous to whooping-cough, in so far as the excito-motory system is involved. I relate but one case. The patient was a child four months old, in whom stridulous breathing had continued for some weeks. I was called when general convulsions supervened, and found that the disease was due to stomachal and intestinal irritation, arising from improper diet. The regulation of this, however, was not alone sufficient to cause any abatement of the symptoms; but, after the administration of valerian, the carpo-pedal contractions disappeared, stridulous breathing recurred but once, and the general irritation of the nervous system was allayed. It is an objection, that the drug is nauseous; but, by combining it with some aromatic, this may be easily overcome.

5.—*On the Local Use of the Perchloride of Iron in Uterine Affections.* [Wien Med. Woch., No. 57, 1867, and British Med. Journal, March 14, 1868.]

The objection to perchloride of iron as a topical application in diseases of the womb and uterine passages is, that this salt, unless very much diluted, corrodes the epithelium of the mucous membrane lining the vagina. To prevent this corrosive action, which is caused by the presence of free hydrochloric acid, Dr. Braun adds carbonate of soda to a solution of the perchloride of iron, and converts the latter into a neutral salt. For this purpose, the addition of four grains of crystallized carbonate of soda to one ounce of the liquor ferri perchloridi will generally suffice. Chloride of sodium is formed; but the hæmostatic properties of the perchloride are, Dr. Braun states, intensified rather than diminished by the alteration. Dr. Braun has used concentrated solutions of the perchloride treated as above, in various affections of the uterus, and with very good results. In cases of endometritis, hæmorrhage, and of bleeding from small fibrous tumors, he dilates the cervix uteri by sponge-tents, and injects a small quantity of the liquor ferri into the cavity by means of the uterine syringe. For puerperal metrosepsis and putrid vaginal discharges, from one-half to one ounce of the solution is injected by means of an elastic ball fitted to the end of a catheter. To lesions about the os and cervix uteri, Dr. Braun applies balls of compressed cotton-wool, completely saturated with a strong solution of the perchloride.

Too great precaution cannot be taken in this matter of injections into the uterine cavity, and we would especially warn young practitioners against this practice. Full dilatation of the cervix is absolutely essential, but none of the troubles arising from this dilatation by the use of sponge-tents are stated above. It is unquestionably a frequent cause of peri-uterine cellulitis, and must not be resorted to as a matter of routine.

6.—*Chlorate of Potash in Gonorrhœa.* [Medical Times and Gazette, July 25.]

M. Pascuel Candela states that he has met with great success in the employment of injections of chlorate of potash in the second or subacute stage of gonorrhœa. It is also useful in the third stage, or gleet, but in this it is less certain, and at all events requires more patience. He employs a solution of one part in thirty of water, at first injecting twice, and in two or three days four times a day, and continuing for ten or twelve days after all traces of the disease have disappeared.—*Presse Belge*, June 28.

7.—*Notes on Carbolate of Quinia.* By H. S. Purdon, M. D. [Medical Press and Circular, October 14, 1868.]

During the last five months I have prescribed the carbolate of quinia in various diseases, which remedy has been recently introduced into practice by Professor Bernatzik (see *British and Foreign Medico-Chirurgical Review*, April, 1868). In the following brief notes I shall merely mention the results I have obtained; and firstly, a few words on the preparation of this remedy are necessary, as my formula is slightly different from that of Professor Bernatzik.

Take of quinia 120 grains, deliquered carbolic acid 30 minims, rectified spirit 75 minims, evaporate to the consistence of treacle, and make into pills with extract of gentian and powdered cinnamon, each pill to contain one grain of quinine and one-fourth of a grain of carbolic acid. This preparation has been always carefully prepared of uniform strength for me at Mr. Cantrell's establishment, in this town. Professor Bernatzik has used the carbolate of quinia with success in the treatment of pyæmia, erysipelas, typhoid and puerperal fevers. I have prescribed it with benefit in secondary syphilis, furunculi, anthrax, as in the cases hereafter recorded.

Carbolic acid as an internal remedy is now becoming more frequently used, especially in "blood diseases," and the latest example of this agent being successful in a disease in which other medicines have hitherto proved useless is in leprosy, especially the anæsthetic variety. The formula used is carbolic acid, ♏iij; dilute acetic acid, B. P., ʒjss.; rum, ʒiij; syrup, ʒjss; water, ℥iv.; to be taken directly after a meal, twice daily. (See Review of Dr. Newton's work on Anæsthetic Leprosy, *Journal of Cutaneous Medicine*, No. vi., page 187.)

As an external remedy, carbolic acid needs no special pleading on my part, the practice of Professor Lister, of Glasgow, founded on the "germ theory" of M. Pasteur, being now well known.

Carbolic acid, especially when combined with a tonic, as quinine, has been given internally in zymotic affections, on the Continent, on the principle of its destroying the fermentive process of the so-called blood diseases, and also I may mention that at a meeting of the Pathological Society of London, held on Tuesday, March 3, 1868, John Simon, Esq., F. R. S., in the chair, the President communicated for Professor Hallier, of Jena, some discoveries concerning the relation of cryptogamia to contagious diseases. That gentleman had traced, some time ago, a fungus associated with cholera, and he had now discovered characteristic fungi in six other diseases, viz., in the eruption of variola, variola ovina, vaccinia, and in the blood of typhus, typhoid, and measles. Although Professor Hallier's views have not been confirmed in these countries, still, if correct, they would lead us to suppose that the carbolate of quinia will be a valuable medicine in such affections.

Quinine has likewise the property of destroying vegetable parasitic growths, and, as well as I remember, a statement appeared on this subject in some of the medical journals at the commencement of the present year; and it is a remedy commonly prescribed in parasitic scalp-diseases of children. Dr. Bence Jones some time ago pointed out the existence, in the human body, of a substance resembling quinine in fluorescence and possessing the optical and chemical properties of that drug, and Drs. Rhoads and Pepper (Pennsylvania Hospital Reports quoted in *British Medical Journal*) have ascertained that a diminution of animal quinine is produced by malarial poison, as in ague, and I am inclined to think that we have in the carbolate of quinia an excellent remedy for ague and allied diseases.

From the preceding brief remarks, it will be evident that, in combining two such valuable remedies together as carbolic acid and quinine, a combination is obtained which is likely to prove a useful medicine in zymotic diseases.

Dr. Purdon then details the history of four cases treated with the remedy, which, so far as they go, substantiate his views. Carbolate of quinia in all the cases in which I have tried it—about thirteen—has increased the appetite, and, when fetor of the breath existed, removed it. I think it will prove a valuable remedy in certain forms of syphilitic affections, where mercury has been given injuriously, and when the patients cannot take the iodide of potassium, and are of the poorer class of society, having to endure hard labor, exposure to the weather, and bad food. In furunculi it is also valuable. I have not tried the carbolate of quinia in either erysipelas or fevers, but shall do so on the first opportunity, and have no doubt that it will prove serviceable. And now, in concluding these "rough notes," I hope that some other physician, whose experience and practice are more extensive than my own, may be induced to try this medicine and publish the results of his cases, mine being too few to form any definite opinion from. Thus the truth will be arrived at—"*Ad majoram Dei gloriam.*"

8.—*Phosphoric Acid in the Treatment of Diabetes.* By J. G. THORNLEY, M. D. [Medical Press and Circular, May 20, 1868.]

J. W., æt. 20 years, laboring under diabetes, consulted me in April, 1867, stating that he had been in declining health for some months previously. His condition was then as follows:

Skin hotter than natural, harsh and dry; pulse 89, soft and full; tongue covered with a thick white fur; bowels obstinately costive, the stools being hard and dry; the urine pale, straw-colored, having an odor of fresh apples, and of 1053 spec. grav.; Moore's and Trommer's tests showed the presence of sugar in considerable quantity; the thirst was excessive. There was great emaciation, especially of the face, the bones of which stood out with great distinctness, the aspect presented the malignant hue of organic disease; the gait was slow, feeble, and even stooped, so that, although he was only a youth, he yet reminded one of an old man.

He complained principally of an inordinate and craving appetite, an excessive thirst, and great muscular weakness and debility; so great, indeed, was the debility, that he was scarce able to go upstairs. His appetite was so unsatiable that he was obliged to carry his pockets full of bread and biscuits, as well as eating a substantial meal five times daily; he could not refrain from eating for more than 15 minutes at once, and his thirst was so excessive, that he was compelled to get up three or four times during the night to drink. During the night he frequently drank twelve pints of water, and during the day it was his custom to place his mouth under a water-tap and allow it to run until his thirst was satiated. The quantity of urine passed daily was about 16 pints, and so frequently was he obliged to pass it, that it had induced irritation of the urethra. The mind was depressed, the power of attention weakened, and the manner irritable and peevish. The sexual power was almost gone. Owing to these symptoms he was unable to follow his employment. The heart's sounds, however, were natural in character and rhythm, and nothing abnormal could be discovered on auscultation or percussion. Prior to my seeing him he had been under treatment, which consisted principally in the administration of bitter tonics, the use of bran bread and claret wine. The improvement, however, was trifling.

I commenced treatment by giving grs. v. of Pulv. Doveri three times a day; a full dose (grs. 2½) of opium every second or third night; 25 drops of dilute phosphoric acid in a glass of water thrice daily after meals, and 30 drops of tinct. ferri perchlorid. twice daily before meals. Jalap, podophylline, scammony, and castor-oil, were each in turn administered as purgatives. Warm clothing and entire abstinence from alcoholic liquids were enjoined. Weak beef-tea and mutton-broth were recommended as drink. Under this treatment the improvement became very marked: the urine became less in quantity and of lower specific gravity, so that he was obliged to rise only once during the night to pass water. The weakness became less, and thirst became considerably abated, but the appetite was not changed, it was still excessive, and craving. He became tired of taking medicine, and also of the monotonous diet, which consisted mainly of beef, bran bread, and mutton-broth; he also gave up taking the Dover's powder and tinct. ferri perchlorid., trusting alone to the dilute phosphoric acid, which was now increased to 30, and ultimately to 35, drops for a dose, which latter had still the effect of keeping down the thirst.

As the appetite was still excessive, creosote was tried in various combinations, but, owing to its nauseous flavor, the patient was unable to persevere in its use; it had therefore to be discontinued. Sulphate of zinc, tannic and hydrocyanic acids were tried, but they proved valueless. Cod-liver oil was used for a considerable time, and it seemed to do good; it certainly improved the appearance of the patient. Alcoholic drinks of all kinds, even the claret wine, induced a state of feverishness, and invariably increased the thirst; they were therefore strictly forbidden. The patient himself has the greatest confidence in the dilute phosphoric acid, and continues to take it, to the neglect of every other remedy. It has so much improved him, that he now only drinks four pints during the day, and is seldom disturbed during the night, either by having to rise to drink or pass water. The appetite is somewhat, but not materially, lessened; the skin is almost natural, and the bowels tolerably regular; the urine is greatly lessened in quantity, and of specific gravity 1039, ranging occasionally to 1042, and the strength strikingly improved. He has been able to follow his employment during the past six months, and is much more cheerful than formerly.

Now, I do not mean to say that phosphoric acid will cure cases of diabetes, but I believe that it is the principal, if not the only, agent by which the thirst in diabetes can be materially lessened. I have observed its beneficial effects in two other cases, and I quite concur with the late Dr. Prout, who, I believe, was the first to introduce it to the notice of the profession, that it is of the utmost use in this inveterate disease. As to creosote, I cannot speak definitely, as, owing to its disagreeable taste, the patient was unable to continue its use sufficiently long. Tincture of perchloride of iron, Dover's powder, and opium, are valuable medicines in this disease, but any one of them used separately will not produce the same beneficial or striking effects as the phosphoric acid. As for tannic acid, sulphate of zinc, and hydrocyanic acid, I have never been able to discover their beneficial effects; but, on the contrary, I think the two former are productive of mischief by increasing the constipation. As for cod-liver oil, I would recommend that it should get a fail trial in every case. Perseverance and self-control must be inculcated on every patient, without which, success in treatment can never be attained.

9.—*The Oil of Yellow Sandal-Wood in the Treatment of Gonorrhœa.* By H. W. A. Beach, M. D. [Boston Medical and Surgical Journal, November 5, 1868.]

Having, in the fall of 1865, a number of cases of gonorrhœa under my care, and noticing in a medical journal a statement of the successful employment by East India physicians of the sandal-wood oils in the treatment of this disease, the opportunity was used to test the remedy. Upon looking up the matter, a mention of this use of the oils was found on page 1482 of the U. S. Dispensatory for 1858.

In the first series of cases (five in number), the diet was limited, coffee and liquors prohibited, and an injection of a solution of acetate of lead, three to five grains to the ounce of water, was used. One of the patients found that imprudence in diet made little or no difference as to pain or discharge, and reported the fact to me after the disease had been cured.

Since that time I have placed no rigid restriction on diet, etc., unless the disease was complicated with bubo, orchitis, or syphilitic symptoms. In ordinary cases, when the treatment has been commenced early, five to seven days have sufficed for a cure; but, if the patient has not been seen until the discharge and other symptoms were at their height, ten days or two weeks. In gleet, although the amount of discharge and inflammation might appear to correspond in different cases, the time occupied in curing it has varied much. The shortest has been six days, and the longest about six weeks, but they have averaged three weeks unless complicated with stricture, when the relief has been only temporary. In ordinary cases, after the first series, an injection of tepid water has been used three times daily. Most of the cases (over one hundred in number) have been treated with the oil of *yellow* sandal-wood; that of the white was not found to be effective; while that of the red has been successfully used in a few cases, but the cure has not been so rapid. I have never combined the three oils in treatment, a method mentioned in the Dispensatory. The best and easiest method of administration is, to drop the oil on sugar; for an ordinary case, ten drops three times daily, and for gleet fifteen drops. I have given twenty drops three times daily without any bad effects. In an article published in the *Medical Mirror* of September, 1868, p. 543, and republished in *Braithwaite's Retrospect* for January, 1867, " On the Use of the Oil of Yellow Sandal-wood in the Treatment of Gonorrhœa, by Dr. Samuel

H. Purdon," he states that "in many cases I have had to discontinue its use on account of the nausea it occasioned. The odor of this oil is extremely powerful, remains on the breath, hands, etc., even after being frequently washed. It is also evident in the urine, and in one case I remarked a sickening odor emanating from the penis, and which was very annoying to the patient;" and that "Dr. Thomas Henderson, of Glasgow, states that the oil of yellow sandal-wood acts as a stomachic medicine, occasioning little nausea. Has slightly any smell."

Whether or not Dr. Henderson used the oil uncombined with other agents, Dr. Purdon does not state, but he (Dr. P.), as I understand, combined it with one or more of the following, in each case: rectified spirit; essence of cinnamon; oil of savin; copaiba and compound spirit of lavender; which I should judge might account for "the sickening odor emanating from the penis." I have found that the odor of the urine of patients, who have taken the oil on sugar, is very pleasant, and even suggestive of perfumery. In the breath it is certainly superior to copaiba, and by ordinary care I cannot imagine that the hands will be scented. It might be made into a paste with pulverized sugar, and administered in gelatine capsules, which would be preferable to using the pure oil in that manner, as it might cause nausea by irritating the mucous membrane of the stomach. Patients who have used copaiba have told me that the oils of sandal-wood were much more pleasant to take, and medical gentlemen who have used the remedy at my request have also told me that they place great confidence in its efficacy. I publish these facts, as I cannot ascertain that the remedy is generally used by the profession, and my limited experience assures me that it is too valuable an agent to allow its use to be controlled by irregular practitioners.

10.—*Chloride of Ammonium and Tincture of Aconite in Ovarian Neuralgia.* [Medical Press and Circular, August 19, 1868.]

Dr. J. Waring-Curran states that this combination seems to have a magical influence in the treatment of ovarian neuralgia. He reports six cases in which various sedatives and anodynes had been tried in vain. He prescribed an eight-ounce mixture, containing two drachms of muriate of ammonia, with five-drop doses of tincture of aconite, and found that, before the mixture was finished by the patient, the pains had entirely ceased.

11.—*Bromide of Potassium for the Sleeplessness of Infants.* [Medical Times and Gazette, December 12, 1868.]

M. Moutard-Martin, a candidate in the Section of Therapeutics of the Académie de Médecine, communicates a memoir on "Some Applications of the Bromide of Potassium to the Medicine of Young Infants." Every one, he observes, admits the possession of sedative properties by the bromide, and in this direction it has become one of the most useful substances in the materia medica. Bearing in mind its hyposthenic action in erethism of the nervous system, and its innocuity, even in large doses, he believed that it might be employed with advantage in some of the pathological conditions of very young children. Among these, sleeplessness, alike mischievous to the infant, and wearying to the nurse, is one of very common occurrence. The child does not seem otherwise ill, but has a very great insufficiency of sleep, both by day and night, or only at night. Where a great variety of means has failed to remove this sleeplessness, the bromide succeeds in a remarkable manner, and M. Moutard-Martin adduces in his paper several cases in proof. His conclusions are—1. The bromide of potassium, given in small doses (from five to twenty centigrammes), is very well tolerated by young infants. 2. By its sedative action it cures *insomnia* in these cases. 3. Administered to infants suffering from the accidents of dentition, such as restlessness, *insomnia*, cough, etc., it frequently relieves these; and it is probable that its employment, regulated with prudence, would sometimes prevent the occurrence of convulsions. 4. It should not be administered to infants when suffering from diarrhœa. 5. In certain exceptional cases, in which the nervous erethism is predominant, its action is prompt and decisive.

12.—*Tonka Bean in Pertussis.* By John Cooper, M. D. [Medical and Surgical Reporter, October 31, 1868.]

It was suggested to me that the Tonka bean would be useful in pertussis, as it contained a large percentage of *coumarin*, the active principle of the clover-tops—*Trifolium melilotis*—recommended for that disease. An opportunity offered to try the effect of it, and, in the first case, a child of three years, the results were such as to give encouragement. Subsequently I have tried it in four more cases, two of which were of a grave type. The oldest—a little girl of five years—was a great sufferer, the paroxysms frequent, and exceedingly severe, disturbing her sleep frequently during the night. She began with five drops of the fluid extract in sweetened water every three hours, increased to eight after the third dose. Relief was soon felt, and, the paroxysms gradually subsiding, she soon slept all night, and her cough now seems more like that of an ordinary cold than that of pertussis.

In one case the medicine was all taken and the parents felt the disease cured, and failed to procure more of it. In a few hours the paroxysms returned, when they sent for more of the fluid extract, which again has given relief. With these facts before me, I cannot but feel that in the Tonka we have a remedy which will be of incalculable benefit to children. As far as my observation is concerned, I could not say that the bean cures, nor will I attempt an explanation of its effects, but it surely gives relief, and further experience with it will lead to an estimate of its therapeutical effect. It is to be hoped that the profession will examine into it with care, for I am convinced we have in it a means of saving many lives, besides giving great relief to all who suffer from the disease.

13.—*Therapeutic Value of Olive-Oil.* By Dr. Ramskill. [British Medical Journal, December 12, 1868.]

At a recent meeting of the Harveian Society, Dr. Ramskill read a paper on this subject. The paper consisted of a history of two cases of gout, which he considered types of the kind of disease, and especially as to the stage of it in which the internal administration of olive-oil was most useful. The first type was represented by a patient affected with comparatively acute attacks, reappearing with very short intervals, and making little or no way toward convalescence. Bark, quinine, iron, had frequently failed to prevent a reappearance of the disease. Cod-liver oil was rarely borne at all. In such cases, olive-oil, given when the patient lapsed in the interval, had answered all the requirements of the case in Dr. Ramskill's hands. Nutrition began to improve, and no more relapses occurred. The second case was a type, also, of a class of cases, where, all acute symptoms having long subsided, vague and uneasy pain remained in all the joints—associated only with stiffness or difficulty and pain on movement. The general health, meanwhile, slowly deteriorated, with much general wasting; and no impression could be made on the system by the usual tonics. Here the use of olive-oil was more quickly beneficial; but it often seemed to act as a hæmatogen. In true rheumatoid arthritis, the use of the oil was, perhaps, more beneficial than most ordinary remedies; but Dr. Ramskill could make no assertion as to the favorable action of any single remedy on this disease. The dose of olive-oil should not exceed a teaspoonful at the commencement; it should be gradually increased until a laxative effect announced the attainment of such a dose as exceeded the absorbent power of the stomach and intestines. Any vehicle, containing a few drops of sulphuric ether, would then help to assimilate the oil and prevent diarrhœa. It was important to obtain perfectly fresh and new oil, to insure absence of rancidity, and consequent eructations and disorder of the stomach. Dr. Ramskill considered the remedy as a combination of food and physic; but still one unattainable by ordinary food and medicine. It was important to begin its administration when the patient was free from acute attacks, or, at least, from fever. The passage of pale urine, or of greenish-yellow urine, that suggesting oxaluria, was an indication for its use, especially if accompanied by hypochondriasis, general *malaise*, and weariness and aching of joints. Dr. Ramskill said he had found great benefit from the use of olive-oil at the Hospital for Paralysis and Epilepsy, especially in cases of lead-poisoning, after the acute symptoms, such as colic, had subsided; always in the malnutrition accompanying paralysis of the extensors of the hands; also in Cruveilhier's atrophy; and in epilepsy, associated with great cachexia. In all these conditions, supposing cod-liver oil disagreeing, and therefore inadmissible.

14.—*Sulphite of Soda in Chronic Cystitis.* [British Medical Journal, September 19, 1868.]

It has been known for some time that the salts of sulphurous acid, when taken internally, possess the power of preserving healthy urine from putridity. Reasoning from this, Mr. L. Willcox, late house-surgeon, supposed they would have the same effect in those cases of chronic cystitis where, from the large secretion of mucus, the urine becomes putrid before it can be evacuated, and thus the walls of the bladder are kept in constant contact with a highly irritating fluid, and have no chance of regaining their normal condition. He, therefore, lately recommended and employed the sulphite of soda with very marked success in several cases of chronic cystitis in the hospital. The urine, from being intensely alkaline and horribly fetid, loaded with pus, and with difficulty retained for a quarter of an hour, shortly became clear, acid, without odor, and capable of being retained for two or three hours. The mineral acids had been tried in the same cases previous to using the sulphite, and with little benefit.

15.—*Oxide of Zinc as a Therapeutic Agent.* By J. WARING-CURRAN. [Lancet, October 24, 1868.]

The therapeutical importance of oxide of zinc as an article of the materia medica, has induced me to impartially and fairly test its influence and effect in those several diseases which its administration would most likely benefit, and the result of my experience may, I think, be confidently relied upon by any who may feel inclined to exhibit it in similar affections.

Phthisis.—Oxide of zinc will be found of great value in the earlier stages of this distressing disease. It seems to steady the nervous system, and act as a sedative to the wandering pains and general depression which exist at the commencement of the complaint. In the later stages, where profuse sweating and colliquative diarrhœa harass the patient and quickly lower the vital capacity, its very wonderful effect of checking the latter and arresting the former is best learned from the lips of the sufferer himself. It certainly is one of the physician's grandest weapons, and an agent, once employed, never again to be dispensed with. I prescribe it in two-grain doses, with extract of conium, in the form of pill, giving three in the day to begin with, and gradually increasing the dose, every week or so, until fabulous quantities of the oxide are taken daily.

Epilepsy.—The oxide of zinc in pill and the bromide of potassium in mixture form a method of treatment I consider not to be equalled, when assisted by the occasional application of Chapman's spinal ice-bag, in cases of epilepsy. The oxide of zinc I have administered alone, giving camphor julep as a placebo, in some severe forms of the disease; and, although under its use the number of attacks became less, and the general health of the patient improved, I did not obtain the same satisfactory results as when combined with the bromide. The bromide I have also exhibited *per se*, but experience has taught that the one is essential to the other, and that the two drugs combined form an indispensable method of treatment, by steadying the system generally, equalizing the circulation of the nervous centres, and thus warding off the attacks of the most distressing complaint which comes within our province to treat.

In *Spermatorrhœa* and *Gleet* I find it a drug of the greatest importance. In the former, I have given it during the day, with some camphor and conium at bedtime, with the happiest results. Under its administration in the latter, the mucous membrane appears to take on healthy action, and we get speedy riddance of a class of patients who hitherto gave no little trouble to their attendant, while in many instances they themselves became hypochondriacs.

Chronic Diarrhœa and *Dysentery* are best and most speedily treated by the oxide of zinc.

In *Hysteria* I have remarked it a more reliable and efficacious preparation than the over-estimated valerianate.

In *Delirium Tremens*, when the morphia or cannabis has done its duty, the after-treatment by zinc is something to be observed rather than described; the constant dread, restlessness, and disturbed sleep, are quickly overcome by the bracing agency of the drug. "Every pill I swallow steadies me," he tells you. I had a patient who never went to town without a box of the pills in his pocket, for, if his story is to be believed, "they keep off the after-consequences" of the stimulating beverages in which he indulges. Suffice it to say he was the frequent subject of delirium tremens. I brought him through one severe attack, and, although his habits are not changed, he has not had a similar one since; but he takes care to carry the prescription in his pocket-book, and attributes his good fortune to the medicine, which he looks upon as a prophylactic.

When commencing the administration of oxide of zinc, care must be taken not to give it upon an empty stomach, as it produces a nausea which gives the patient a dislike to the drug, and an antipathy difficult to overcome by subsequent reasoning.

16.—*Some of the Uses of Bismuth.* [California Medical Gazette, January, 1869.]

In a paper on this subject, Dr. W. F. McNutt, of San Francisco, remarks: In organic disease of the heart, where the liver becomes congested, and the secretion of bile suppressed, sulphuretted hydrogen is generated from the decomposition of albuminous food. Every physician is familiar with the train of nervous symptoms that such patients exhibit—sleeplessness, restlessness, palpitation, pains, etc., etc., and flatulence of the bowels; and he also finds that the symptoms are aggravated by opium, while blue mass, etc., is also mostly useless. Believing that these nervous symptoms are due mostly to the poisonous effects of absorbed sulphuretted hydrogen, I administer bismuth, and almost always succeed in quieting the patient.

November 22d I was called to see a lady, with valvular disease of the heart (the mitral), in consequence of which the lungs and portal circulation were congested. She had violent palpitation, was very nervous and restless, had been unable to sleep for several nights, had pain in the side, headache, and bowels flatulent and constipated, but passages very offensive. I administered bismuth freely, and on the 24th she reported herself as having had the best night's sleep that she had enjoyed for weeks, though a variety of medicines had been administered to her. I have a number of similar cases in my note-book.

I believe that bismuth not only destroys the sulphuretted hydrogen present in the bowels, but is an antiseptic to albuminous matters, preventing their putrid decomposition. That bismuth destroys the sulphuretted hydrogen present in the bowels is proved by the fact that, if administered for a few hours in considerable quantity, the flatulence disappears; and, if a dose of oil is given, the evacuations are as black as tar, where the evacuations were natural or clay-colored before the bismuth was given. It is the chemical action of the gas upon the bismuth which gives the evacuations their black color. But a small portion of bismuth, when given in powder, and in doses of from gr. 5 to gr. 20, is dissolved in the stomach and absorbed. The remainder passes undissolved into the bowels, and, while it may have some local anæsthetic action on the bowels as on the stomach, it will be comparatively inert, unless there be sulphuretted hydrogen present.

Its action on the sulphuretted hydrogen is more particularly demonstrated when given for chronic diarrhœa. Some have attributed to bismuth astringent, tonic, and sedative properties, on account of their success with it in chronic diarrhœa. Others have given it for the same disease without the slightest benefit, and consequently have denied that it has astringent, or sedative, or tonic properties. While the fact is, that in cases of diarrhœa, that are caused or kept up by the poisonous effect of sulphuretted hydrogen, I have given bismuth, combined with a few grains of Dover's powder, with more real benefit to the disease than any drug I could administer. Opium alone is useless, or worse. Charcoal, by absorbing the gas, has been, next to bismuth, the most beneficial.

17.—*Sulphurous Acid in the Treatment of Pyrosis* is strongly recommended by Dr. Lawson. *In every instance, he asserts, in which it has been employed, it has, in a very short time, completely arrested the water-brash secretion.* It checks the excessive secretion, stops the vomiting, and lessens the epigastric dragging pain so often complained of. Dr. L. considers, provisionally, that its good effects are due to the production of ozone and the destruction of vegetable germs.

The doses of the acid (B. P.) vary from ♏xxx to ʒj three times a day, shortly before meals. Bitter infusions may be employed as a vehicle, but plain distilled water is best.—*The Practitioner*, September, 1868.

18.—*Lobelin in Rigid Os and Perinæum.*—In the *Chicago Medical Journal*, for December, 1868, Dr. George Kilner, of Sullivan, Illinois, strongly recommends the use of lobelin, the active principle of the *lobelia inflata*, for the purpose of producing dilatation of the os uteri and perinæum during labor. He uses it in the form of a rectal suppository, 5 grains of lobelin rubbed up with cocoa-butter q. s., and he states that fifteen or twenty minutes will usually suffice to bring about the desired effect. Notwithstanding that this is, perhaps, the most powerful relaxant in the materia medica, he claims that no danger need be apprehended from its use in this way, and supports his position by several concisely reported cases from his own practice.

19.—*The Use of Chestnut-Leaves* (*Castanea Visca*) *in Whooping Cough.* By J. Ludlow, M. D. [Cincinnati Lancet and Observer, March, 1869.]

In the treatment of this very fatal disease to childhood, I have always wished for some agent or remedy to relieve that most urgent of all symptoms in the second stage, the spasm that is so trying to the sufferer, and to which the patient often succumbs.

I, like the drowning person who grasps at every straw, have tried all the various remedies that have been recommended by the best authority, from time to time, from all of which I obtained some assistance, but not one of the many met my desire.

More than two years ago the remedy placed at the beginning of this article was brought to my notice by a professional brother of this city, Dr. Unzicker, he telling me that in his hands it had never failed to *cure*, not *relieve* the spasm, and bring the disease to a speedy end. I, therefore, determined to give it a fair trial whenever opportunity offered, and in every case that I have treated since, I have invariably used it, and with the happiest results. I found in all cases that it would, in from five to ten days, relieve the spasm, and in about two weeks cure it; and the little sufferer would whoop no more, but go on to a speedy recovery, to the great delight of myself and its friends.

I make an infusion of the leaves, by taking one-half of an ounce of them to the pint of boiling water, and afterward add to this a pint of cold water, to which is added sufficient of white sugar to make it palatable to the patient, and give of this *cold* as much as I can get the patient to take during the day and evening. Giving it to drink in place of cold water, the child soon gets to like it, and I have no trouble in getting a sufficient quantity taken to produce the desired result. This remedy I believe of such importance, that I would urge it upon the attention of the profession at large.

20.—*On the Fluid Extract of Liquorice-Root as an Excipient for Quinia.* By Joseph Harrop. [American Journal of Pharmacy, February, 1869.]

In the November number of the *Journal* (1868), I noticed a communication on syrup of chocolate as a vehicle for quinine, by the use of which it appears the taste of quinine is entirely avoided. There is at least one objection to the use of the preparation referred to, the time and pains necessary to prepare it. This might not be an objection to some apothecaries, but to the majority I think it would be. The writer also mentions its liability to ferment, which would be another objection.

After reading the article referred to, I remembered having on several occasions added as an adjuvant powdered extract of liquorice, as per prescription, to quinine mixtures, but which, as far as I could judge, did not much conceal the bitter taste of the medicine. About the same time I had occasion to take some quinine, and on looking around for something to overcome its bitterness, I tried the fluid-extract of liquorice-root, which I thought would at least be nicer than the powdered extract, when I found it to completely conceal the taste.

The inference then may be that the glycyrrhizin, said to be the source of the sweet taste in the root, and described as a transparent yellow gelatinous substance, overcomes the bitterness of the quinine, and that the principle is, in part, destroyed or impaired by the process of manufacture in producing the commercial extract.

Might not the fluid extract or a concentrated tincture be used to more completely cover the taste of aloes in the tincture, of which Dr. Wood says "liquorice answers the purpose imperfectly?" also in other preparations having an unpleasant taste?

Miscellaneous and Scientific Notes.

Our readers will observe that the Journal appears, with this number, in a new dress. The change from tinted to white paper has been made, for the simple reason that it is impossible to obtain always the same shade of color, as a reference to our back volumes, when bound, will show. We have always procured our paper from the same mill, and made every effort to secure uniformity in the tint; but it is a simple impossibility, and therefore we have decided to use white paper—keeping the quality the same as that hitherto used.

We have also made a reduction in the size of the type used for "original communications." This not only gives a very considerable additional amount of reading matter in each number, but also it adds materially to the elegance of our pages. Of the reduction in price and the increase of the amount of reading matter, we presume our subscribers will make no complaint, but will rather find in these changes an additional motive for rendering us their hearty indorsement and support.

We call especial attention of our readers to the advertisement of the vacancy in the position of House Physician to the Infant's Hospital on Randall's Island, in this city. This post is an important one, and demands a first-class man. The selection of the incumbent by competitive examination is deemed the wisest method that can be resorted to to secure such a man, and it is to be hoped that this principle, which, certainly, is the correct one, may yet be applied to the choice of incumbents for all prominent positions in our public medical institutions.

American Medical Association.—*Meeting at New Orleans, Tuesday, May 4th*, 1869.—I am authorized by the Atlantic and Mississippi Steamship Co., of St. Louis, to say, that they will carry Doctors and their Ladies to attend the Meeting of the Association, at the following rates, viz.:

From St. Louis to New Orleans, each Passenger	$20 00
" Cairo " " " "	18 00
" Memphis " " "	15 00
Returning:	
From New Orleans to Memphis, each Passenger	$15 00
" " " Cairo, " "	18 00
" " " St. Louis, " "	20 00

The Company starts a first-class Steamer from St. Louis every forty-eight hours, Sundays included, and the usual time from St. Louis to New Orleans is about six days, and from Cairo to New Orleans, about four and a half days. Passengers can go on any of their boats at the above rates, which include meals and state-rooms.

These Steamers, which will, however, take down the great body of the Doctors wishing to travel by the river, will leave St. Louis at 5 o'clock, P. M., on Wednesday, the 28th of April; Cairo on Thursday evening, after the arrival of the afternoon train on the Illinois Cen. R. R.; and Memphis on Friday evening, reaching New Orleans from Monday noon to Tuesday morning.

Parties arriving by railroad, to take this boat, at either St. Louis, Cairo, or Memphis, had better make their calculations to reach the point of embarkation at least one train in advance of the time of the boat's departure. But, if any one should arrive at Cairo or Memphis too late for this boat, he will find one or more boats passing for New Orleans every day, at ordinary fare.

It was deemed best to make the arrangement for a definite fare each way, so that one can go either down or up, or both, as he may choose, by the river, and know in advance just what he will have to pay.

To avail himself of this boat, one may apply on board, making it known that he is on his way to attend the Association, or, perhaps better write me a line as early as convenient, stating how many ladies, if any, will accompany him.

Good steamers also leave Louisville for New Orleans every two or three days, occupying from six to seven days in the passage down. If a considerable number of Doctors should take passage from Louisville, and make application in a body to E. T. Sturgeon, Supt. Louisville and New Orleans Packet Co., at Louisville, or the Capt. of a Steamer starting at the proper time, he would probably give them a liberal reduction from the ordinary fare, which varies from thirty to forty dollars, according to the style and accommodation of the boat.

From Cincinnati no suitable boat can be taken through to New Orleans, but the Cincinnati and Louisville U. S. Mail Line will take one going to the Association from Cincinnati to Louisville on one of their fine boats, and from thence to New Orleans by rail, for Forty Dollars, and return him on the same route to Cincinnati free. Two Mail Boats leave Cincinnati every day at 12 M., and 6 o'clock, P. M., except Sundays, one at 12 M. I am not advised as to what arrangements have been made with other railroads.

JAMES F. HIBBARD, M. D.,
Richmond, Ind.

The following information is communicated by the sub-Committee of Arrangements of the American Medical Association for this city and Brooklyn:—Rate of passage per New York and New Orleans Steamer of Livingston, Fox & Co. (office 88 Liberty St.), via Havana, to a Delegate of American Medical Association, either way, will be $40; rate of passage to New Orleans via Savannah (between Savannah and New Orleans, by rail), $48 50. By former route, a steamer will leave April 24th; by latter, April 27th.

A company of six or more delegates can each obtain from M. J. B. Yates (basement, 229 Broadway), Railroad Excursion Tickets from New York to New Orleans and New Orleans to New York, for $70.

Time of passage by first route,	8 or 9	days.
" " " " second "	5½	"
" " " " last "	3½	"

THE O. Æ. SOCIETY OF BELLEVUE HOSPITAL COLLEGE.—The numerous members of this society throughout the country will be pleased to learn that the last annual reunion, held on the 26th of February, was more than usually brilliant and successful. The addresses were peculiarly appropriate to the occasion, and were received with marked satisfaction by the audience. We give below Professor Elliot's reply to the toast of "Woman," which strikes us as a peculiarly happy handling of so delicate a subject:

A sincere friend said to me to-day: "My dear fellow, I hear that you are to respond for the ladies this evening. You have my sympathy." I thanked him, and acknowledged that I needed it; and so do I confess, confidentially, to you all, that I have need of yours, and especially now when my friend Sayre has included my toast with his own in his comprehensive grasp.

It is a serious thing to speak for woman just when she is about to break that long silence which has distinguished her through the lapse of ages, and to speak for herself. Let us hope that, if she bring to future discussions the terrible earnestness and directness of purpose which she displayed in the apple question, at least she will select topics less fraught with woe to man.

Perhaps this may be one of the last toasts to woman to which a man may respond. The time may be at hand when this is to be superseded by one which will even now, we trust, cause their veins to tingle, and when we may hear, in soft, melodious cadence, from the lips of beauty—"The gentlemen, God bless them!"

With women arguing metaphysics in the pulpit, managing political majorities, directing the press, and wielding the scalpel in sick-rooms, there is but a step to the remaining fields of labor, and there may be some girlish face here present, covered only with mantling blushes, which may groove its furrows amid the responsibilities of the senate-chamber, or in expounding the majesty of the law.

Who shall paint the dawn of this era, so full of the fruition of woman's joys and privileges? The palette of another Guido must furnish the brilliant colors. Still Aurora, with rosy-tipped fingers, will marshal the procession; still the feminine encircling hours will keep their accustomed places, but the male Apollo will be hurled from the central place of honor, and some bright-eyed goddess, typical of woman's future, will seize the reins with no reluctant hand. Love will reign supreme. A new millennium will shed its benignant rays upon the land. Man, shorn of his supremacy, and abnegating even claims to military distinction, will still, we trust, bask in the sunshine of woman's favor, and wish that all the Venuses shall enjoy the rights and privileges of *Mars*.

With such a future, well may a man shrink from responding to-night to such a toast. But I am here with a herald's privileges, though not in a herald's garb. I am in a representative capacity; I speak for my constituents. Four hundred manly hearts, not satisfied with hearing me lecture on woman for five or six months, demand a final word before we part. Ladies, I present these four hundred hearts for your most distinguished consideration. Four hundred, did I say? Just as in that suffrage, soon to be abolished by woman, the male voter deposits a ballot that represents the united wishes and convictions of himself and wife, and daughters, so do these four hundred hearts have each four separate pulsating chambers, throbbing so harmoniously now that methinks you must all be able to hear them. And so, instead of four hundred, do I present sixteen hundred palpitating candidates for favor.

What aspirations does my feeble advocacy present! What longings for homes and firesides are interlinked with these emotions! What delicious courtships, what rapt elysium of engagements, what calm, enduring matrimonial joys do these longings prefigure! Let us hope that four hundred girlish hearts awaken in hastening rhythm to respond to the tumultuous beatings of my constituents.

What matters the language in which these longings are conveyed? What matters the man who presents them? Doremus brings from the mystic arcana of his laboratory a long black wire to meet another long black wire. Who can foretell the wondrous result? At once, on meeting, an intense flame starts into being, in which solid bars of iron melt in fervent heat and illumine the hall with lurid glare and iridescent sparkles. Why may I not do as well as a long piece of black wire—I, who bring into this arena the concentrated heat of four hundred manly hearts? The result will not astonish the world, but will sparkle in separate matrimonial paragraphs in the daily papers, and light up many a happy home. For the enduring comfort of these happy homes, I must say that, although my four hundred have no Tennyson to hymn their praises in stately stanzas, yet, in the simplest and sternest prose do I declare that the immortal six hundred at Balaklava never charged as my four hundred will.

Appointments.—University of Maryland, Baltimore, Md.—The following changes have recently taken place in the Faculty of this institution:—Prof. N. R. Smith now fills a newly-created chair of "Clinical Surgery;" Prof. C. Johnston, the chair of "Principles and Practice of Surgery;" Prof. J. J. Chisolm, "Operative Surgery, with Clinical Professorships of Ophthalmic and Aural Surgery;" Prof. Allan P. Smith, newly-created chair of "Venereal Pathology;" Prof. F. T. Miles, formerly of the Medical College of the State of South Carolina, the chair of "Anatomy;" Prof. F. Donaldson, chair of "Physiology and Hygiene, with Clinical Professorship of Diseases of the Throat, Lungs, and Heart."

Dr. Joseph M. Toner, of Washington, D. C., again makes an appeal to the profession to aid him in the collection of materials for his "Biographical Dictionary of Deceased American Physicians." The work is already in a state of considerable forwardness, and is designed to contain a biographical sketch of every deceased practitioner of regular medicine, from the earliest settlement of our country to the present time.

The success of the undertaking must obviously depend, in a great measure, upon the coöperation of the medical profession, and such relatives and acquaintances of deceased physicians as may have it in their power to communicate the essential information. Address, No. 350 Pennsylvania Avenue, Washington, D. C.

Another death from chloroform is reported in London. A druggist, who had been in the habit of taking chloroform to relieve pains in the face, was found dead with a handkerchief in his hand, and by his side an empty phial which had contained chloroform.

A similar case occurred in this city a few days since, in the case of a prostitute who was in the habit of inhaling chloroform for the exhilarating effects it produced.

New Experiments on the Production of Tubercle.—In the last number of Virchow's *Archiv* is contained an account of an extended series of experiments by Cohnheim and Fränkel, relating to the inoculation of tubercle, which in every respect confirm the results arrived at by Dr. W. Fox and Dr. Burdon-Sanderson a year ago. Having first satisfied themselves as to the entire identity of the lesions with miliary tuberculosis in man, both as regards the naked-eye characters and the microscopical structure, they directed their attention to the question whether or not they are due to a specific virus. With this view they introduced into the peritoneal cavities of guinea-pigs minute portions of various morbid growths, as well as of healthy tissues obtained from the post-mortem theatre. The results agreed entirely with those described by Dr. Fox in his lecture last May. Not satisfied with these results, they introduced into the same cavity portions of india-rubber, of charpie, or of paper. The results in all cases were the same. A caseous abscess, enclosed in a vascularized capsule, was always formed at the seat of insertion, while the peritonæum, lungs, liver, and other organs, were the seat of unequivocal miliary tuberculosis. From these facts the author drew the same inference as that arrived at by Dr. Burdon-Sanderson in his communication to the Pathological Society last April—namely, that the infective material, whatever may be its chemical or physical properties, is contained in the caseous pus which in the guinea-pig is always to be found in greater or lesser quantity in the neighborhood of inoculation wounds. For the purpose of testing the truth of this surmise, the authors varied their mode of experimentation. In several guinea-pigs a liquid consisting of caseous pus, diluted with a solution of one part of common salt in two hundred parts of water, was injected into the jugular vein. All became tuberculous. Fresh whipped blood was then injected into other animals in the same way, and finally, in another the operation preliminary to injection was performed without injecting any thing. The results were the same throughout. All had abscesses at the seat of injury, and all eventually died of miliary tuberculosis. The authors went a step further. Knowing that whereas in the guinea-pig any external wound, however inconsiderable, is apt to produce suppuration, and slight injuries very rarely produce this effect in the dog, they repeated the same experiments on this animal. The result confirmed their anticipation. The injection of caseous pus always produced general miliary tuberculosis. It was not necessary to repeat the negative experiment, for the every-day experience of the physiologist teaches that in dogs the mere operation of injection by the veins is never attended with any consequences.

The terms in which Drs. Cohnheim and Fränkel formularize their conclusion, "that tuberculosis is due to the entrance of dead and inspissated pus into the circulation," are not the same as those employed by Dr. Sanderson, who attributed it to the "caseous softening" of the primary local induration, and considered that, in inoculation under the skin, subcutaneous suppuration was the essential condition of infection; but we do not see that there is any essential difference between the two explanations. It is proper to add that the Berlin experiments were begun in 1867, and were carried out in entire ignorance of those made in London.—*Lancet.*

A. Snowden Piggot, M. D., Professor of Chemistry in the Baltimore College of Dental Surgery, and senior editor of the *American Journal of Dental Science*, died February 11, 1869, of paralysis. Professor Piggot was a well-known author, and a leading authority in dental science.

The bill for the legalization of dissection in the State of Maine, which passed the Senate, and which it was assumed would become a law, was lost in the Lower House. This narrow-minded and illiberal act, deliberately resolved upon, is in ill-accord with the spirit of the age, and cannot but prove detrimental to the medical interests of the State.

Death of Professor Grisolle.—Grisolle died on the 10th of February last, in the 58th year of his age. He had been withdrawn from the world of science for three years previously by a stroke of apoplexy. At the funeral, which recently took place in Paris, the pall-bearers were the Dean of the Faculty of Medicine; M. Blache, President of the Academy of Medicine; M. Husson, Director of *l'Assistance Publique;* and a member of the *Société Médicale des Hôpitaux.* Addresses were pronounced at the tomb by M. Behier, M. Chauffard, and M. Millard.

The following number of young physicians have been graduated this spring from the several medical colleges of the country. We are reminded forcibly of Abernethy's famous saying, "God bless me, gentlemen, what will become of you all?"

Bellevue Hospital Medical College, N. Y.,	124
Buffalo Medical College, N. Y.,	34
College of Physicians and Surgeons, N. Y.,	92
University Medical College, N. Y.,	82
Washington University, Baltimore, Md.,	80
Rush Medical College, Chicago, Ill.,	108
Medical Department of Yale College, New Haven, Conn.,	8
Cincinnati College of Medicine,	28
Medical College of Ohio, Cincinnati,	70
Miami Medical College, Cincinnati,	48
Massachusetts Medical College, Boston,	58
University of Nashville, Nashville, Tenn.,	71
Jefferson Medical College, Philadelphia, Pa.,	126
University of Pennsylvania, Philadelphia,	130
Kentucky School of Medicine, Louisville, Ky.,	31
University of Louisville, Louisville, Ky.,	70

LARYNGOSCOPY WITHOUT A MIRROR.—Dr. Voltolini has published an article in the *Berlin. Med. Woch.*, wherein he shows that the epiglottis and the interior of the thyroid body can be seen and acted upon, without a mirror, in the following manner: Do *not* press down the tongue with a spatula, which measure is likely to obscure the parts, but hold the tongue firmly out of the mouth; push up the thyroid cartilage externally with the fingers of the hand, which keeps the tongue steady, and with a little appropriate instrument press the epiglottis forward. The author maintains that in this wise he saw the thyroid cartilage, and thinks that, with a proper patient, the interior of the thyroid body could be explored. Dr. Voltolini alludes to a case of a gentleman, aged fifty-six, in which Dr. Middledorpf, who had requested the author's assistance, succeeded in removing a polypus, the size of half a pigeon's egg, from the walls of the pharynx, by means of the galvanic wire.—*Lancet.*

HOSPITAL FOR INCURABLES AT ALBANY.—We are informed that Angelo Ames, Esq., of Albany, N. Y., has signified his intention of at once founding, at Albany, a hospital for incurables. Mr. Ames is one of the governors of the present Albany City Hospital, and to him, in a large measure, that admirable institution is indebted for its working success. The new hospital, which he so liberally proposes to establish, will be supplementary, in certain respects, to the present, and will provide for a numerous class of poor patients who are now thrown upon the cold charity of the almshouse. How much better this dispensing of wealth during one's own lifetime, than the leaving of it to be quarrelled over by dissatisfied heirs, and possibly largely reduced in amount by expensive litigation, of which we have, just at present, a prominent instance in this city! Mr. Ames's example is a noble one, and worthy of emulation.

GONORRHŒAL SCIATICA.—M. Fournier recently brought under the notice of the Paris Hospital Medical Society the subject of "Gonorrhœal Sciatica," which he believes to be a real variety of this painful affection, and not a mere coexistence of sciatica in a subject suffering from gonorrhœa. This he does for the following reasons: 1. The sciatica figures among the number of the manifestations of gonorrhœal rheumatism. In an ordinary case of this in which the joints and eyes are characteristically affected, sciatica springs up without any obvious cause, and in a few days again disappears. 2. In the course of several successive attacks of gonorrhœa, sciatica has been observed associated with other indubitable signs of urethral rheumatism. This prevents our attributing the occurrence of the affection to a mere coincidence. M. Fournier not only illustrates this successive appearance of the affection from his own practice, but by reference to Home's "Practical Observations on Stricture," which contains two remarkable cases. 3. In those subjects who have the singular peculiarity of not being able to contract gonorrhœa without also suffering from rheumatic accidents, we sometimes find the sciatica alternating in the course of a series of such attacks with other rheumatic symptoms of a different order. 4. Gonorrhœal sciatica differs from ordinary sciatica in its mode of evolution. Commencing usually quite suddenly, it at once reaches its *summum* of intensity; and then the pains, at first excessive, soon become more tolerable, so that by the third, fourth, or fifth day relative ease is established and continues, the entire duration of the affection being usually very short as compared with ordinary sciatica. 5. Gonorrhœal sciatica differs in another notable particular from the ordinary disease in being easily curable, cupping cutting it short with remarkable rapidity, so that a second application is rarely required, and the external use of narcotics completes the cure. 6. M. Fournier calls attention to a curious lesion which is but little known, and may, during the course of a gonorrhœa, give rise to an erroneous supposition of the existence of a sciatica. It consists in an acute *hygroma of the ischiatic bursa*, often accompanied by great pain and symptoms simulating sciatica. Hidden beneath the soft parts, it can be appreciated only with difficulty, and has often been mistaken for a partial sciatica. Since M. Fournier read his paper he has published it in detail, with cases, in the *Union Médicale* for November 24th.—*Medical Times and Gazette.*

A Gynecological Society has been established in Boston under the auspices of Drs. Winslow Lewis as President; H. R. Storer as Secretary; and G. H. Bixby, Treasurer. The constitution, for a copy of which we are indebted to Dr. Storer, is well conceived, and, if the full designs of the Society are carried out, it will accomplish much good. A provision is made that the Library, in case of the dissolution of the Society, shall be presented to the Public Library of the city of Boston.

The papers of M. Leon Lefort, Secretary of the Surgical Society of Paris, on the "Relative Excellence of Army Medical Organizations in Great Britain, France, and the United States," have been translated and condensed by an anonymous correspondent for the *Medical Record* of this city. This communication is both interesting and valuable, and may be considered very complimentary to us as a nation. The materials from which the portion of the report relating to the United States armies is drawn are merely Circulars Nos. 6 and 7, issued from the Surgeon-General's office. In this simple statement, and in the value which is attached to these circulars, we find a powerful argument for the completion of the medical history of the war, and an occasion again to express the hope that Congress will exercise a wise liberality in carrying out the proposed work. The volumes already issued by the Sanitary Commission contain large stores of valuable material, and much information relative to the organization and conduct of the medical department, but we cannot hope from this source to obtain that thoroughness of detail of our recent medical experiences in war which must prove so valuable a contribution to science.

CENTRAL PERFORATION OF THE PERINÆUM: PASSAGE OF THE WHOLE FŒTUS THROUGH THE RENT.—Professor Stolz, of Strasburg, has communicated this case to the Surgical Society of Paris. So rare are these cases, that the professor has seen only one example during a practice of forty years. The patient, aged twenty-seven, had severe pains, and when the head was on the point of passing the vulva, it retracted. A pupil midwife was supporting the perinæum, when the head suddenly passed through the latter, and so rapidly that the whole child was born through the abnormal aperture. The child measured about seventeen inches, and weighed almost seven pounds. The rent was two and a half inches long. The fourchette was entire, and the internal sphincter also. The constrictor vaginæ was torn posteriorly, and likewise the inferior third of the vagina, with the corresponding recto-vaginal parietes. Some gangrene occurred, but on the twelfth day the wound looked well, and was contracting. On the thirtieth day the wound was getting smaller; the woman left the hospital, and was not heard of until one year after the accident (the summer of 1865), when she came to complain of procidentia uteri. The aperture was still visible, and somewhat occluded by the neck of the uterus. At that period the patient again disappeared, and the account of the case closes thus unsatisfactorily. How the woman was allowed to leave the hospital with the rent gaping, when it might have been so easily sewn up, can hardly be understood, unless she positively refused an operation. This supposition seems near the truth, as it is not said that, when she came a year afterward, it was proposed to close the hole by sutures, and replace the uterus.—*Lancet.*

THE Siamese twins, since their arrival in Europe, have been examined by a number of eminent surgeons, with special reference to an operation for separation. *The Lancet*, of February 13th, contains a lengthy description of the twins, and gives sphygmographic tracings of their pulses. A comparison of these tracings shows that Eng, who is the larger, and more vigorous than his twin-brother Chang, possesses the stronger heart. The arterial system of Chang is evidently more advanced in the changes which indicate the organic degeneration of later life. Mr. Syme, of Edinburgh, strongly objected to any attempt to effect separation, and in this opinion it is understood that Sir James Simpson concurred. Sir William Ferguson, in London, thinks that the operation of separation would prove fatal to both twins, although in itself it presents no difficulty, and would require the division of no structure necessarily dangerous to touch. In addition to the risk incurred in making a large wound, which must contain exposed cartilage, psychological causes would come into play which could not fail to be of a very depressing character. It is reported that Nélaton, in Paris, after a careful examination of the case, thinks the operation feasible and devoid of danger.

EXTIRPATION OF AN INVERTED UTERUS.—At a recent meeting of the Birmingham and Midland Counties Branch of the British Medical Association, Mr. A. Baker exhibited an inverted uterus, which he had removed by means of the *écraseur*. We take the following report of the case from the *British Medical Journal:*

The patient was about forty-one or forty-two years of age. Nine years previously, a fortnight after a hard labor attended with unusual loss, while straining, a large protrusion occurred, with flooding. The swelling was returned by the late Mr. Wilcox, of Warwick. Since that time she had scarcely ever been free from sanguineous discharge, profuse or scanty; and had occupied mostly the recumbent posture. Ten or eleven months ago, a small polypus was removed from the uterus by the wire *écraseur*. Still the symptoms were not removed; and she was received into the Birmingham General Hospital, where the fundus uteri was found inverted through the os into the vagina. The constriction of the body by the rigid upper margin of the cervix gave to the tumor a strong similitude to fleshy polypus with a broad stem; but the uterine cavity was scarcely an inch in depth, and the uterine sound could be carried all round the tumor on the same level. The fundus uteri could not be felt in the hypogastrium, and an examination of the rectum yielded negative results. Drained of blood, and incapable of any exertion, the patient was anxious for relief. Hence it was determined to attempt reduction under chloroform; and, that failing, to remove the protruding part. On October 30th, while she was in a state of anæsthesia, the hand was passed into the vagina, and efforts to return the inverted fundus were continued for three-quarters of an hour. These being ineffectual, the fundus was pulled down through the vulva, and the part removed by the chain-*écraseur*. One or two small vessels bled, and were touched with the actual cautery; when, as slight oozing continued, a small sponge was placed against the crushed surface, and the parts were returned into the vagina. For two or three days she was feverish, and had abdominal pain, with slight tenderness; but, under opium and fomentations, these symptoms subsided, and she was now convalescent.

We had supposed that the day for a resort to this extreme operation had nearly gone by; and cannot but think, in view of the successful cases reported in this country, where the inversion had existed for a long series of years, that an effort of "three-quarters of an hour" was entirely inadequate to determine the feasibility of the operation of reduction, or to justify a resort to the more severe operation of excision.

SHOULD PERSONS WITH CONSUMPTIVE TENDENCIES MARRY? By DR. HENRY I. BOWDITCH.—More than thirty years ago, we were consulted by a young man, who frankly confessed that he believed he had disease of the lungs, and he asked us to say whether or not he could rightly be married to an excellent young person to whom he had been for years engaged. We found that his opinion was correct, that decided disease of one lung existed, but it was not at the time in an active state. We found, however, at the same time, that an adverse opinion on our part would forever shatter the hopes of two lovers who had been for years devoted to one another. There was not an argument, save this local disease, which we could bring against the idea of marriage. We will not attempt to indicate the reasoning whereby we came to the decision that we ought not, by any motion of our own, to prevent the union. Ten or twelve years of sweetest married life were the result, and then the husband died of lung-disease. But exactly what the youth feared came to pass, namely, one of his children died in very earliest infancy and the other at the age of twenty—both of consumption. The latter was particularly interesting to us. He seemed to be in perfect health. On arrival at an age to commence business, all his antecedents and his hereditary tendencies were forgotten. Instead of avoiding all excitants to consumption, he was allowed to settle on the borders of a lake in a large Western city, and there to become a clerk to a corporation doing an extensive business, by which he was very much confined to his desk and over-worked. As we have seen in the previous paper, he should, of all things, have avoided just such a location and that employment,—he should have sought for an active out-of-door life if possible, in some dry inland town. After he had been laboring at his desk, however, a comparatively short time, we were summoned only to find him past all relief. In a few months he died with rapid consumption.

In the above case, we deemed ourselves justified in allowing the marriage to be consummated, because, as may be stated generally, we were not sure that the disease would progress, and there was a chance of the husband's getting well, and there was no certainty that children would be born. But there are cases every day arising in which it seems almost madness for either party to think of marriage—cases in which death seems foreshadowed with the certainty of almost absolute fate. In many of such, parents and physicians alike should protest.—*Atlantic Monthly* for March.

At the meeting of the French Academy of Medicine, December 8, 1868, M. Armand, surgeon-major of the army, presented a paper on the *therapeutic uses of opium-smoke.* From a series of experiments by M. A., it would seem that it is a safe therapeutic agent of considerable efficacy in chronic bronchitis and laryngitis, and in a certain number of acute cases of these affections; in whooping cough, where the patient is old enough to smoke a pipe; also, in angina pectoris, asthma, nervous palpitations, gastralgia, and enteralgia. It has also been found relieving, in facial and dental, and supra-orbital neuralgias, and in hemicrania. He has used it too with advantage in muscular and articular rheumatism, for, besides its sedative action in small doses (one to ten grains in twenty-four hours), in larger doses it induces general calorification and diaphoresis.

Hepatic pulsations, accompanying certain disorders of the liver, were first noticed, 1863, by Frerichs and Seidel, and the correct interpretation of the phenomenon was subsequently given by Friedreich. Dr. Mahot has recently published an inaugural thesis, entitled *Battemens du Foie dans l'insufficence tricuspide*, with an interesting case observed in Dr. Potain's wards at the Necker Hospital, Paris.

Tracheotomy in Syphilitic Lesions of the Air-passages.—M. Trélat, a candidate in the Section of Surgical Pathology, read at a recent meeting of the Académie de Médecine a paper on the above subject, of which the following are the conclusions:—1. Syphilitic lesions of the air-passages, necessitating tracheotomy, may arise in any stage of the disease, but are of most frequent occurrence during the tertiary period.

Their nature, seat, and extent vary, but yet they are of most common occurrence the nearer they are to the upper orifice of the larynx. 2. The obstruction they give rise to may arise suddenly, but it is not in general more gradual, and supplies an element of diagnosis. 3. An attentive study of the signs and symptoms characterizing obstruction of the larynx and of the trachea proves that it is possible to distinguish these two orders of lesions, which it is of such importance to recognize with regard to prognosis and therapeutics. 4. The diagnosis is based upon the loss or preservation of the voice, on the epoch of the appearance of the dyspnœa, and on laryngoscopic examination. 5. Excellent results have followed upon tracheotomy in laryngeal obstructions, while to the present time it has only been attended by failure in tracheal obstructions. 6. When the operation is indicated, it should be executed without delay, as death may result from the occurrence of a sudden suffocative paroxysm. 7. Although tracheotomy offers so few chances of success in contractions of the trachea, it should nevertheless be tried after a diagnosis which may have to be rendered more accurate and precise during the course of the operation. 8. The operation requires to be modified according to the nature of the lesions, and success is only to be hoped for when the obstruction can be passed and dilated by means of a suitable canula. In the contrary case failure is certain. 9. When tracheotomy is followed by a cure, the period during which the canula has to be retained varies according to the nature of the lesions. The medical treatment must be resumed as soon after the operation as possible, and carefully persisted in. The employment of M. Broca's canula (its opening limited to inspiration) enables us to exactly determine the epoch at which the canula may be removed and the wound healed without incurring any danger.—*Medical Times and Gazette.*

A PROPOSED NEW EYE AND EAR HOSPITAL.—A number of influential gentlemen of this city have associated themselves together for the purpose of procuring funds with which to establish, in the northerly portion of the city, a hospital for diseases of the eye and ear. The circular which they have issued sets forth the striking need that now exists for the establishment of such a charity, and the advantages that may accrue from it in advancing the science of medicine. It is proposed to raise $100,000; no subscription to be binding until the sum of $50,000 shall have been pledged, and then a sufficient amount shall be called in for the purchase of a suitable site. The project certainly commends itself, and we hope to see it carried through. The names of Drs. C. H. Agnew, D. B. St. John, Roosa, and E. G. Loring, which appear on the circular, are a guarantee that the medical interests of the institution will be carefully and thoroughly provided for.

Dr. Graily Hewitt, of London, on assuming the chair of the Obstetrical Society, made a brief but eloquent address, from which we quote a paragraph, quite as interesting, and more important, perhaps, to us—who are surrounded with "reformers" of all stripes—than to our more conservative friends abroad:

> I think it well now, gentlemen, to refer for a moment to a matter which has an important bearing on obstetric science and on obstetric practitioners. I mean that relegation of obstetric practice to another, I will not say inferior, order of practitioners, which has been advocated in certain quarters. In the interests of our science, and not less in the interests of the public, we cannot refrain from taking a decided position in this matter.
>
> The practice of obstetrics requires education, high mental training, and a wide range of medical knowledge, not less than tact and judgment. Physical strength and fortitude, also, are qualities which cannot be dispensed with. In the skilful obstetric practitioner we find a physician as well as a surgeon. Nature is ordinarily equal to the accomplishment of the parturient process, but we all know how much care and skill are required when Nature fails in her operations, and how thankfully and appreciatingly the patient welcomes the means of relief from her troubles. The simplicity of the natural process has induced the belief in some quarters that for this department of the profession the midwife only is required. The fact that all goes so smoothly in the majority of instances lends support to this fallacy; but we, who know how unexpectedly difficulties sometimes occur, requiring great skill in order that they may be surmounted, do not trust our own wives and daughters in any but skilful as well as practised hands. It may be a matter of opinion, but I cannot refrain from expressing my belief that the great emergencies of obstetric practice can never be adequately met by any thing short of masculine intelligence. Undoubtedly the requirements of the community are greater than we can at all times and in all places supply, and therefore midwives must,

under many circumstances, be necessary; but it is certain that a skilful medical man will be always sought for when a real difficulty occurs. Another phase of this question also must not be lost sight of. The employment of midwives, many of them quite unskilled and uneducated, has been productive of evils with which we are all too familiar. It is, indeed, a question whether it be not the duty of this Society to take steps for obtaining some legislative enactment to check the license which exists in this particular. We have no desire to dictate to the public concerning a matter wherein, in the long run, their own judgment is pretty certain to be right; but it is assuredly our duty to let it be known in some tangible way that we do not consider it right or safe that the practice of midwifery should, under any circumstances, be allowed to be undertaken by individuals without credentials of any kind, often possessing not the smallest knowledge on the subject.

COHNHEIM'S ALLEGED DISCOVERY.—In the *Dutch Archives of Medical and Natural Sciences*[1] (as we learn through the *British and Foreign Medico-Chirurgical Review*), Dr. Koster treats of Cohnheim's alleged "discovery," by which pus-globules outside of the capillaries are made out to be white corpuscles of the blood which have emerged through orifices in the capillary walls. Dr. Koster appears to think this "discovery" to be quite established; and goes on to say: "If we should soon succeed in obtaining a more positive and distinct explanation of the origin of the change of the circulation of the blood, as a starting-point for inflammation, a great light will undoubtedly be shed by the facts discovered in late years upon a process of which, we may, in general, assert what Cruveilhier said of phlebitis in particular, '*qu'elle domine toute la pathologie.*'" That is to say, as Dr. K. seems to suggest, a person is exposed, while heated, to a draught of cold air, and has, within a few days, a pneumonia. Between the chilling process and the inflammation there is a hiatus in science.

We learn, however, through the *Archives de Physiologie*, etc., of Dr. Brown-Séquard, that Professor K. Balogh, of Pesth, denies the accuracy of Cohnheim's conclusions relative to the white corpuscles. Repeating the experiments of the latter, Professor Balogh readily perceived the white globules collect at certain points of the vessels, particularly at the origin of the ramifications; but, in spite of the closest attention, and although the experiment was often watched for more than twenty-four hours, he never saw a white corpuscle on its way through the walls, or having emerged. He considers the views of Waller, as reproduced by Cohnheim, the result of optical error. He does not positively deny the existence of openings in the walls of the vessels, but is convinced that those openings are only large enough to allow the passage of fluids. He thinks the white globules found in the vicinity of the vessels are produced by the multiplication of cells of connective tissue.—*Boston Med. and Surg. Journal.*

---

[1] Conducted by Donders, Koster, and others.

The Value of Medicine.—Sir Thomas Watson, in retiring from the presidency of the Clinical Society of London, gave a very appropriate as well as very brief address, from which we extract the following sensible remarks:

It seems to have been thought, in some quarters, that I had renounced my faith in physic—that I undervalued the resources and the usefulness of our art. Such a notion is the very reverse of the truth. I am anxious to have the effects of remedies carefully ascertained and certified, just because I have so great faith in their real force. What I deprecate, what I would fain see altered, what it is one great end of this Society to do away with, is the vagueness of aim, the uncertainty of result, the merely tentative nature of too many of our prescriptions. Far from thinking that our warfare with disease is a vain warfare, I am only desirous that our arms should have the precision of the modern rifle, instead of the wild flight of the old-fashioned smooth-bore. Probably I have even greater reliance than many physicians upon the virtues of drugs—of what used to be called simples—a word I like, because it helps continually to suggest to one's mind the golden rule, that their administration should be simple; that they should be mixed as little as possible with other substances which might confuse and vitiate the conclusions to be drawn from their actual operation. I am one of those who hold to the doctrine—always within its proper limitations, the limitations assigned by Bacon—the doctrine of final causes, so despised by modern philosophy. I believe that those subtle essences which human research and ingenuity have succeeded in deriving from various substances in nature, and which, when applied to the human body, sometimes even in very minute quantities, have a potency so marvellous as to abolish pain, to compel sleep, to extinguish fevers, to stop for long, perhaps for ever, the recurrence of paroxysms of epilepsy which had continued to recur for years, were implanted in those substances by the Creator, among other uses, it may be, for these very services to mankind, and that there lie concealed in other substances, and especially in the vegetable kingdom, many analogous healing powers, which it is a part of man's mission and privilege, and will be his great reward, to search after and to discover.—*Medical Times and Gazette.*

In the *Union Médicale* of January 21st, it is stated that the last number of the Reports of the Medico-Chirurgical Society of Bordeaux contains an account of a case of epilepsy, in which the patient, a woman, took the bromide of potassium in amounts varying from thirty grains to one ounce per diem, for a period of about one year. At the end of this time she died, as is alleged, from the debilitating effects of the salt.

Dr. Karmin, of Töplitz, reports (*Wien Med. Wochenscrift*, xviii., 35, 1868; *Archives Gén. de Méd.*, Fev., 1869) a case of locomotor ataxia, in a man, aged 33, following venereal excesses, and exposure to damp cold, cured by galvanism (the constant current), and the baths of Töplitz.

Dr. Heschel, of Prague, has published (*Vierteljahrschrift f. die Prat. Heil*, 1868; *Archives Gén. de Méd.*, Fev., 1869) two cases of that rare affection called *pariencephalia*, in which fistulous tracts exist in the brain, causing a communication between the cavity of the arachnoid of the surface of the hemispheres and the lateral ventricles. Both were in tuberculous subjects.

Profuse Hæmorrhage from the Trachea during the Operation of Tracheotomy.—Dr. Nicolaysen, of Christiania, Sweden, in a letter to Dr. Sayre, of this city, says:

"I had to make tracheotomy on a phthisical patient in the internal wards of the University Hospital. After opening the trachea and being about to put in the canula, a large mass of pus, followed by four or five ounces of dark blood, flowed out of the trachea. As I had stopped all bleeding before opening the trachea, I could not understand it at first, and looked in vain for the source of the hæmorrhage; it stopped suddenly after a fit of coughing, and was renewed twice in the afternoon, but in less quantity. When the man rallied—he was almost dead when I operated on him, and remained so for several hours afterward—I asked him about foregoing hæmoptysis; he answered that it was not the first time he had expectorated large quantities of blood. He had no recollection whatever of the operation.

I have never heard of this complication during a tracheotomy, and I can understand that when the operator is not sufficiently cool he would become rather puzzled, seeing the stream of blood flowing out of the trachea. The patient was almost blue, and the blood quite black on the first occurrence of hæmorrhage, being but slightly acted upon by oxygen for many hours. Later, it was of a purple color, as commonly in hæmoptysis. The patient is doing well.

"Vaccination in the Prussian Army."—The Prussian Government has just published the annual report on the results of vaccination and revaccination in the army. During 1867 127,279 soldiers were vaccinated, and, among these, the cicatrices of former vaccinations were distinct in 107,778 (84.68 per cent.), indistinct in 13,291 (10.44), and non-existent in 6,210 (4.88). Vaccination was followed by regular results in 79,670 (62.59), by irregular results in 12,372 (9.72), and was without effect in 35,237 (27.69); of these last, 34,790 were again vaccinated, and in 11,775 instances (33.85) with success, in 23,015 (66.15) without success. The entire number of successful vaccinations amounted to 71.84 per cent. Among these 91,445 successful cases there were 47,236 (51.66) in which the true pustules varied from one to five in number; in 27,544 (29.69) from 6 to 10; in 15,074 (16.48) from 11 to 20; and in 1,591 (1.74) from 21 to 30. The total number vaccinated during the years 1833–'67 inclusive amounts to 1,787,824, and the mean percentage of success for that period is 63.21. During the year 1867 there occurred in the entire Prussian army 164 cases of variolous disease—viz., 19 of varicella, 134 of varioloid, and 11 of variola, two of these last proving fatal, and none of the 11 having been revaccinated. During the years 1834–'67 inclusive, there have occurred 3,601 cases of the three forms of variolous diseases in the Prussian army, of which number 113 have proved fatal, or 3.138 per cent. With respect to vaccinating with a mixture of glycerine and vaccine virus, so strongly recommended by Geh. Rath Dr. Müller, the present reporter, Staff-Surgeon Prager, observes that the trials have not been sufficiently numerous in the army to enable him to come to positive conclusions. He observes that we should scarcely expect such good results from its employment in revaccinating recruits as have been obtained in the primary vaccination of infants. The matter is, however, to be thoroughly investigated and reported upon next year.—*Med. Times and Gazette.*

Phenic Acid in Syphilis.—Dr. Minteforte, in the *Giornale Italiano delle Malattie Venere*, etc., recommends the application to syphilitic ulcers of phenic acid in water, five parts to one hundred. Dr. Fidele de Fieri extols the deuto-phosphate of mercury, one grain a day, continued for two months, in tertiary syphilis.

Dr. Livingstone, the celebrated traveller and geographer, has been elected a corresponding member of the French Academy of Sciences, by a vote of 44 out of the 56 electors present.

At the University College Hospital, London, Mr. Erichsen has recently performed, for the relief of bony anchylosis of the head of the femur, the operation described by Dr. Sayre in the January No. of this journal. At last reports the patient was doing well.

Dr. Lionel Beale, it is reported, is about to resign the professorship of Physiology in King's College, London, a post which he has held most creditably for the last sixteen years. His successor is not yet named.

Poisonous Hair-Dyes.—The frequent impunity with which leaden and other metalliferous hair-dyes are used, when only applied at intervals, has led to the introduction of a more dangerous class than these, called hair-restorers, in which a slower action of lead is employed to blacken the hair by daily applications. The most romantically named hair-dyes and restorers are just so many solutions of lead, mercury, silver, or copper, combined with mordants or decomposing agents. Those of nitrate of silver destroy the hair, but do not injure the health. Mr. Erasmus Wilson tells us that one of the most largely-used hair-restorers contains as much as a drachm of acetate of lead to half a pint; it is sold for more guineas than it is worth pence in point of money value. Leaden combs, used daily, produce also insidious forms of lead-poisoning. Schott publishes, in the *Gazette Médicale de Paris* (1864), an instructive *post-mortem* examination of a fatal case. Those who have used some of these poisonous preparations with impunity for a number of years should yet remember the fate of Mademoiselle Mars, who also dyed her hair, in the hope of eternal youth, and succumbed in one night, under cerebral disturbance produced by a new application. The pearl-white powders, which are becoming more and more fashionable for giving the complexion the dull Parisian whiteness of skin—the *teint mat*—are equally dangerous, and produce numerous poisonings, especially amongst dramatic artists. There are many innocuous powders which answer the purpose; but carbonate of lead adheres so much better, that it is still the favorite, as it was when Ovid denounced it in his *Ars Amoris*, and Martial in his Epigrams.—*Brit. Med. Jour.*

BIRTH OF A LARGE CHILD.—Dr. Brotherston, of Alloa, recently communicated to the Edinburgh Obstetrical Society a description of the birth of an unusually large child. Its dimensions were, viz.:

Weight, 17 lbs.; length, 23½ inches; circumference round the head over the occipital and frontal prominences, 15 inches; circumference round the shoulders, 20 inches; circumference round the chest, 15½ inches; circumference round the stomach, 17 inches; from funis to sole of foot, 10½ inches; from funis to head, 13 inches; circumference of thigh, 9 inches; length of leg from trochanter to heel, 10½ inches; length of arm, 10 inches.

The child was perfectly formed in every way, and was still-born. It had died after the passage of the head through the pelvis and soft parts, but could not be resuscitated.

DIFFUSE CAPILLARY EMBOLISMS IN FEBRILE DISEASES.—Dr. Charlton Bastian has brought forward some interesting observations based on a case of erysipelas of the scalp, associated with delirium during life. He found that the small arteries and capillaries throughout the gray matter of the brain were more or less occluded by aggregated masses of white blood-corpuscles. The same capillary embolisms were met with in the kidneys and liver, leading to commencing degenerations of these organs. From observations which Dr. Bastian had previously made on the microscopical characters of the blood in cases of febrile disease associated with high temperature, he was led to believe that the white corpuscles, which seemed to show an increased irritability in these affections, might cohere so as to form masses capable of occluding small vessels. He is disposed to attribute the delirium occurring in this and in some other similar febrile affections to these obliterations of vessels in the gray matter of the brain; and he is also disposed to think that the albuminuria so frequently met with in these affections may be explained by a similar affection in the kidney. These observations open up an extensive field of further pathological research and clinical deduction.—*Brit. Med. Jour.*

NEW YORK

MEDICAL JOURNAL:

A MONTHLY RECORD OF

MEDICINE AND THE COLLATERAL SCIENCES.

Vol. IX.] MAY, 1869. [No. 2.

Original Communications.

Art. I.—*Differential Diagnosis in Disease of the Spine.*[1]

By Charles F. Taylor, M. D., New York City.

Mr. President: It is with considerable hesitation that I attempt to interest the members of this Association this evening, arising chiefly from the apathy that exists in the profession upon the subject which I have chosen for my remarks. The matter of early diagnosis in disease of the spine is very important. By disease of the spine I mean disease of bodies of the spinal vertebræ, which originates, as I think, in various ways, but, if not arrested, eventuates in more or less loss of substance and deformity, and is called "inflammation of the vertebral bodies," "caries of the vertebræ," "spinal arthrochondritis," or "Pott's disease" of the spine. This affection is very rife in every community at large, though fortunately comparatively rare in family practice.

---

[1] These remarks were made, in substance, before the N. Y. Medical Journal Association, February 12, 1869.

The apathy I speak of arises from several sources. In the first place, medical literature, so far as I have been able to discover, is utterly barren in reference to the diagnostic signs of disease of the vertebræ; nor is the subject mentioned by teachers in our medical colleges. Beginning practice with little or no knowledge of the subject, the ordinary practitioner is unable, with the few isolated cases he may meet, to accumulate a sufficient number of facts on which to base any conclusions in regard to them. The result is, that the characteristic symptoms appearing, as they always do, long before the deformity, do not arrest attention, and are forgotten when a progressive deformity reveals the presence of a grave disease. So the prevalent ignorance is continued. But I can assure you that many valuable lives are lost every year from the want of knowledge on the subject of early diagnosis in this disease. Having had unusual facilities for studying this class of cases, I desire to give you this evening the result of my observations in the single direction of diagnosis: comparative or differential diagnosis. These observations have been carried on now for above ten years, and since May 1, 1866, I have kept a systematic record of those cases which have been under prolonged observation. This record shows 382 cases of Pott's disease of the spine, including 140 cases in the Orthopedic Dispensary.

Please remember that all of these cases were under observation for a length of time; for, knowing that their treatment must be protracted, and, having seen the infelicitous results of trusting to the judgment of the patients themselves or of their friends, I have been in the habit of taking my cases for a certain length of time—generally for one year at a time—being thus enabled to regulate the frequency of the patient's visits. Thus I have been able to observe carefully and consecutively a large number of cases, and to collect trustworthy data in regard to them. I hope that the apathy I have spoken of with regard to this disease may be dispelled; I mean with regard to the *disease*, not the deformity, which is easily enough detected. This is the more important because it is now demonstrated beyond a doubt that a large number of these cases can be cured without deformity, if taken in the early stages.

It is not my intention to enter upon the discussion of the pathology of disease of the spinal vertebræ; but I will simply state that many of these cases are inflammatory in their origin, and, as I have said, at this stage curable; and I wish specially to direct your attention to the characteristic symptoms of the disease before the deformity becomes manifest, i. e., at that stage of the disease when its true character is not commonly recognized. Some of these I am fortunately able to illustrate to-night by two cases which I shall present before you. They are very simple cases, not specially marked in their rational signs, but sufficiently so to distinguish the disease from any thing else. They show also a *slight* deformity already. I could relate many instances—indeed, they are constantly recurring—where very sad results have followed failure to detect the disease where the rational symptoms are much more prominent than in these cases.

I wish to refer again to the necessity of always keeping in view that the deformity is not the disease—that the disease must have existed long enough to cause a certain amount of destruction before the deformity can occur. I have known cases where all the rational signs existed for a number of years before the appearance of deformity. Usually several months intervene between the earliest symptoms and the occurrence of the deformity; and it is generally possible, by the aid of these symptoms, to trace back the disease, from the point at which you first see it, to the period of the original injury, if it had such an origin. It generally happens that these symptoms have not been connected with the spine either by the patient or by his physician.

There are cases in which a very slight amount of physiological disturbance is manifest; that is, where there is a low grade of inflammation, causing only a very slow absorption of bone or cartilage; and there are other cases where the absorption of bone goes on very rapidly. I have now under my care a boy who fell upon the ice, and about a week afterward was thrown down in the street and roughly handled by some of his playfellows. Within a month he showed decided deformity. It is possible, however, that these injuries only demonstrated the existence of the disease that had before been latent, and we must always consider this chance of error. But it is unquestionable that the disease does sometimes make as rapid progress as it appeared to do in this case. On the other hand, I have had under treatment patients in whom the disease had existed for a number of years unsuspected. Slow absorption of the vertebræ was all this time going on, yet the rational symptoms had never been attributed to that cause. Some of these were ladies, and had been treated for a considerable time for uterine disease, which they had not. On the other hand, there may be disease of the spine existing unsuspected by those not familiar with its rational signs, in connection with more or less uterine disease. One such case I now have. Last summer, the spinal affection beginning to make more rapid progress, her health began to fail, and the symptoms became more acute, and pointed so clearly to disease of the spine, that, when she came under the observation of Dr. Vermilye, it was at once detected. We must, therefore, allow the greatest variety in the matter of duration of the disease before the accession of its more serious symptoms or the appearance of a deformity. As an example of the detection of the disease before the occurrence of deformity—the main object of my remarks to-night—I will give one or two cases out of many that I could name. A boy came to me with the early symptoms very prominent; his treatment was undertaken, and in three or four weeks he was so completely relieved that no symptoms of the disease remained, and his friends regarded him cured. This is a dangerous period for these patients, because their parents or friends assume that when there are no symptoms of the disease there is no disease, and it is often difficult to induce them to continue the treatment. In this case, after about six months, during four or five of which he had felt entirely well, the boy left town. His apparatus was allowed to get out of order, and in about three months the disease returned violently, causing considerable deformity. Now, had the treatment been continued, there would have been no deformity, and very likely some would have denied that spinal disease had existed. Take another case. A patient came to me with very slight deviation of the spinal column. She came much against the advice of her family physician, who said that she had no spinal disease at all. After persisting in the treatment for a year or two, she yielded to her old physician's advice, took off the apparatus, and in four or five months was hopelessly deformed, although her back had been kept perfectly straight during her two years of treatment.

Before enumerating the rational signs of the first stages of Pott's disease, I will just glance at its pathology, in order to render these signs more intelligible, hoping at some future time to enter more fully into the subject. I believe the disease to be usually inflammatory, only one case in fifty, or perhaps one in a hundred, being tuberculous in origin. The inflammation, if not arrested, may eventuate in caries, and perhaps in tuberculous deposit also. I am aware that, in expressing this opinion, I differ from many gentlemen, but I think not from the majority of those who have carefully studied these cases.

Now, let us look at the symptoms which attend the inception of the disease. One of the most persistent of these symptoms (and I believe that I was the first person who called attention to this diagnostic sign) is what may be called gastralgia—pain in the abdomen when the disease is in the lower dorsal or the lumbar region, and generally, pain in front on a line parallel with the disease in the vertebræ. If the disease is in the dorsal region, we have pains in the chest and a peculiar cut-off respiration, as if eversion of the ribs were arrested at a certain point; this has been sometimes erroneously attributed to asthma. I have a case which was treated for a number of months, by a prominent gentleman of this city, for asthma, before the true nature of this symptom was suspected. But, a prominence appearing between the shoulders, I was sent for, and the apparent asthma disappeared on the application of a spinal brace. These cases where the disease is between the shoulders are the most difficult to cure, because the constant motion of the ribs in respiration keeps up the diseased action. If the lumbar vertebræ be affected, pains in the stomach and abdominal region are among the earliest symptoms. As the disease progresses, these are apt to diminish, and often pass away entirely. It often happens that a child is treated for dyspepsia or worms for a considerable time, and, after six months or a year, a projection of the spine appears. Probably in two-thirds of the cases where we see a patient within three or four years after the beginning of the disease, his parents will remember that, some months before the occurrence of the projection, the child was tormented with pain in the stomach and bowels. Disease of the hip is characterized, as you know, by pain in the knee, and all bone diseases are apt to cause muscular contractions, and these abdominal pains are probably caused by contractions of the various muscles supplied by the nerves radiating from the diseased vertebræ. Be that as it may, it is a common symptom; and if the child complains of bellyache not very well defined, forgetting it, perhaps, soon after a severe paroxysm, especially if there is any thing peculiar in the child's walk; if he steps carefully, etc., do not fail to be on the lookout for disease of the spine. Especially, if the child has a careworn and anxious expression, the physician should be sure to undress and examine him very carefully, not necessarily to detect projection of the spine, but to observe his attitude, which is very characteristic.

The pains I have spoken of are sometimes, but not always, in front; sometimes they persist in the side, and generally they take one place and persistently recur in the same locality. In one of the cases I show you to-night, this persistent pain in one point in the side is a prominent symptom! We sometimes have pain in the back also, but not usually in the first stages of the disease. When it occurs it is not a very sharp pain, not like the acute agony of hip-joint disease; it is a dull, heavy pain, easily distinguishable from the hyperæsthesia of the back we so often see; but in no case of Pott's disease which I have ever seen has there been hyperæsthesia along the spinal column. The peculiarity of the patient's attitude is unmistakable. He does not always lean to one side or the other, though frequently doing so; but there is an expression inimitable and easily detected, an effort to get as many springs under him as possible; a letting down of each joint of the body, so as to avoid shock. This is instinctive, and the patient is unconscious of it. He takes a peculiar crouched position, and sometimes is disinclined to sit at all; for, in sitting, he would be folded together, and the pressure upon the bodies of the vertebræ would be increased. When the child comes to his mother's lap, he will fall heavily upon it, and wish to bear his whole weight on his elbows. These symptoms are more noticeable in the severer cases, which will serve as types by which to judge of slighter indications of the same character.

I have mentioned the symptom of breathing *cut short*, when the disease is in the dorsal or lower cervical region. A hacking cough and hiccough are frequently symptoms diagnostic of disease in this locality. When the disease is in the cervical region (one of the best in the spinal column for complete cure), it is sometimes mistaken for torticollis. I myself have once thus mistaken it; and recently I had sent me for torticollis a case of cervical caries. Attention should be called to the fact that when a muscle is relaxed, as the sterno-mastoid will be if the head is drawn to one side, it will become shortened; but this shortening is very different from the active contractions, and the attitude it gives rise to is very different from that of true torticollis. Of course, when the disease has made sufficient progress, there will be slight backward projection. I think the sixth cervical vertebra the one most apt to be diseased in this region, although I have seen the disease extend to and involve the occiput.

Another symptom of spinal disease is contraction of the psoas muscle, which may lead to suspicion of hip-joint disease; but it is easy to distinguish between the two. In this case the disease will generally be in the lumbar region, where the psoas lies in contact with the diseased vertebræ.

If you examine the attitudes of patients with these two deformities, you will see that they are strikingly dissimilar. In hip-joint disease the thigh is flexed upon the pelvis, the lumbar region is thrown forward, the leg is frequently though not always everted, and the whole attitude of the patient is characteristic. In contraction of the psoas muscle you will find the patient drawn down by its action. He inclines to support himself with his hands on his knees, as is never done in hip-joint disease. There is a better mode of discrimination.

My customary method of diagnosis in the early stages—and it is of these alone I am speaking—is to lay the patient upon his face; then take hold of the *well* leg and move it very gently, so as to teach the patient how to relax his muscles. If you take hold of the flexed leg first, he will be so fearful of pain as to make voluntary contraction. Move the well leg very slightly up and down, and laterally, placing the hand upon the pelvis to make sure that it does not move also. In the case of hip-joint disease, rotation and lateral motion are most apt to give pain; and you easily feel that the motion is impeded, that it is not smooth and gliding as in the natural joint; while in the case of contraction of the psoas muscle, the lateral motion is not impeded at all; although it may not extend through a larger arc than in hip-joint disease, still the motion you do get is gliding, showing that the synovial-membrane is uninjured. The crudest method of attempting to detect hip-joint disease is, to rap upon the bottom of the foot. The two diseases may coexist, and this may render the diagnosis more difficult.

Patients frequently come to me, and physicians frequently write from the country, describing exactly the symptoms of the early stages of spinal disease, but saying that, as there is no sensitiveness along the spinal column, they do not suspect disease there. I have often alluded to the fact that in Pott's disease *there never is* sensitiveness along the spinal column. Out of three hundred and eighty-two recorded cases, attended during the last three years, I have never found one case with spinal hyperæsthesia. "Feeling along the back" for tenderness must therefore be abandoned, as a means of diagnosis in these cases. Percussion over the supposed seat of the disease is equally worthless as a means of diagnosis. Too many cases are allowed to run on, until past cure, by trusting to a symptom which does not exist.

Another symptom which may occur in the first stages of Pott's disease is paralysis. It may appear very early, even before any deformity can be noticed. It is not difficult to distinguish this form of paralysis from that due to other causes. In such a case we fall back at once upon the rational symptoms; inquire into the state of the child's health for the last six or eight months, and we generally find that he suffered some injury a few weeks before the date of the earliest symptoms, which will always resemble more or less closely those previously described. Paralysis arising from spinal disease in the early stages is apt to be brief. The child is put to bed, gets rest, and his paralysis passes off in a few days. The paralysis is apt to be more protracted, lasting one or two years, when occurring in the later stages of the disease.

If you find a child with some dragging of the foot in walking, it should at once call your attention to the spine; and generally, when the attention is once directed there, if the paralysis is caused by disease of the vertebræ, it will be possible to discover some slight deviation in the contour of the back. There will probably be no decided projection, but only a slight deviation from the normal curve—the lumbar vertebræ being perhaps less curved forward, or the dorsal more curved backward than normal.

One reason why, in the majority of cases of Pott's disease, the pain is less excruciating than in hip-joint disease, is obvious; the diseased vertebra is not enclosed in a tight capsular ligament; if there be inflammation, there is a better chance to expand; if there be suppuration, the matter has a better chance to escape, without producing violent pressure.

Lateral curvature of the spine is often confounded with incipient inflammation of the vertebræ; sometimes from the mere name "spinal disease" applied to the former. The two conditions are as unlike as black and white; yet the first stage of inflammation of the vertebræ is often attended with some lateral *deviation*, which, to the inexperienced eye, might suggest lateral curvature. Apart from the entirely dissimilar attitude in spinal disease, due to the child's effort to prevent shock, the form of deviation is very different; it is not so much a curve as an angle. We may say, as a rule, that in lateral curvature you have one or two other lateral curves, compensatory to the main one; and that, in Pott's disease, the spinal column generally follows two very nearly straight lines from above and below, until they meet; at this point of meeting, the projection will ultimately appear. If this be not the case, it is still not certain that there is no inflammation of the vertebræ; but there are very few instances in which the rule will not hold. Sometimes there are two points of disease, but these cases are rare, and it is unnecessary to allude to them here, my object being to call your attention to the more prominent and more easily recognized symptoms. I should say that lateral curvature, except in rare instances, does not commence until the twelfth or fourteenth year, while the majority of cases of Pott's disease occur earlier, although it *may*, and often does occur, up to old age. In a young lady of eighteen, the presumption is in favor of lateral curvature; in a child, of angular curvature; but presumption should never be allowed to prevent careful physical examination, and a faithful consideration of every rational symptom. But inflammation of the vertebræ may, possibly, supervene upon lateral curvature, for, of course, there is nothing in the latter to prevent the former; and I have seen a number of such cases. In these cases, we fall back upon the rational signs as in other cases, the lateral curvature being entirely accidental, and unconnected with the symptoms of a diseased vertebræ.

Another symptom supposed to indicate spinal disease, I have often alluded to; I refer to the so-called "spinal irritation," or what I call *backache*, so common in delicate adult women. I have said that, in all the cases I have ever seen of true spinal disease, there has been but one or two cases of spinal hyperæsthesia, and in those cases the hyperæsthesia was wholly due to other causes—such as uterine disease, nervous exhaustion, etc. I am well persuaded, from observation of many cases of both classes, that where there is hyperæsthesia of the back, it is, in general, a very good sign that we have no inflammation of the vertebræ. Whatever the cause of the backache, such cases are not to be treated as cases of spinal disease, unless the latter can be made out by other symptoms.

I have here two cases I would like to show you. This little girl—twelve years of age—was sent to me two or three weeks ago. She has all the symptoms I have described; pain in the stomach; pain in the side; the peculiar attitude—a slight tipping of the trunk to one side. I should say that this case is entirely curable with reasonable care. I do not think there is any caries there; I think the disease, up to the present time, is purely inflammatory.

About one year ago this girl began to complain of paroxysmal pains in the sides and stomach. She would suddenly press her hands on her side or stomach, and cry out. Then the pain would pass off, and for a time it would be forgotten. About the same time a peculiar attitude was noticed; in this instance, she would lean to one side. This girl was sent to the dispensary for a supposed lateral curvature, although a practised eye can see that the lumbar portion of the spinal column is not as it should be. Although there is not yet any sharp angular projection, there is a characteristic straightening—an obliteration more or less complete—of the natural forward curve in this region, which shows that the destruction of the vertebræ has already commenced. There is also a stiffening of the muscles of the trunk which can be seen as I attempt to move her, which is very characteristic. It is an instinctive muscular effort to prevent any motion which might endanger the inflamed vertebræ. And now, as she walks through the room, you will see how carefully she carries herself; how softly she puts her feet down, reaching the toes forward first, and never striking boldly on the heel as in health. There is an absence of variety and elasticity in her movements, and she leans a little toward the right. Although she goes about, and none of her symptoms are very marked, they are all present, and clearly diagnostic of the later periods of the first stages of disease of the spine. And we can trace the history of this case right back, as we can those of so many others, through various phases, for more than a year, to a time when she received a severe fall (which I should say she kept from her parents), which was no doubt the cause of the disease. These symptoms are and have been so plain, and so easily classified, that it would have been possible to have detected the disease at any time during this year of suffering, if the attending physician had been aware of their nature.

It should be every physician's effort to detect so serious a disease as inflammation of the vertebræ in its incipient stages, while it is possible to arrest it before irreparable injury has been done. If he waits for the projections to appear, to prove the correctness of his suspicions, he simply waits for the vertebræ to be destroyed and the case placed in great peril, or perhaps rendered hopeless.

There is another symptom often seen in the first stages of this disease, which, I believe, I have not yet mentioned. Sometimes there is a lordosis which may be mistaken for the lordosis accompanying certain forms of partial paralysis with muscular atrophy. When we see a child inclining the shoulders backward, the lumbar vertebræ curving to an unusual degree forward, we must at once make diligent inquiries concerning the rational signs of spinal disease. In case of lordosis, the disease is either just below it, that is, at the lower lumbar region, or just above it, in the lower dorsal region. It does not exist in the first stages as a diagnostic symptom, when the seat of the disease is above the tenth or twelfth dorsal vertebræ.

The next case which I shall show you, I have been at particular pains to get here, because it involves some of the nicest points of diagnosis.

This young woman is about eighteen years old, and has never been very strong. She has no very marked symptoms; the persistent pains in the right side, particularly noticed after effort, being the most suspicious. But she is of an age when she may have many pains, and great care must always be exercised so as not to confound those symptoms, characteristic of inflammation of the vertebræ, and the local hyperæsthesia of adult females. You will see that her back presents rather an unusual appearance; there is a lateral deviation of the spinal column, which may be a real lateral curvature; and there is considerable unevenness of the spinous processes which may be congenital, an imperfect or incipient spina bifida. The symptoms are certainly rather obscure, but it seems to me to be one of those cases of slowly-developing disease of the spine, which may take, perhaps, ten years—unless it should be accidentally accelerated by injury or acute disease—to cause a decided projection. There are such cases, and, on the whole, I think she ought to have the benefit of the doubt. If, under treatment, what symptoms she has should disappear, our suspicions will be confirmed, and the girl saved from deformity; if they should continue, we will have been simply mistaken, and no harm done. But it is not often that there is any reasonable doubt, in deciding from the rational symptoms, as to the existence of disease of the vertebræ, long before there has been sufficient destruction to cause any visible amount of deviation of the spinal column from its natural position. It is because it is not often that I feel any doubts whatever, that I present this case to you, with such comments as I have made upon it. But, as a general rule, there is no necessity of doubt in these cases. And as I have already said, given a certain class of symptoms, the differentiation is easy to make out—and to wait, is to trifle with human life.

I wish to impress all those within the sound of my voice, and all those whom my words may reach, with a sense of their responsibility in these premises. Cases are coming to me from this city and from all over the land, which can never be any thing but miserable deformities, because the disease, which gave early, persistent, and painful warning of its existence, was never detected. And only after it had done its work, and the patient was bowed down with incurable deformity, was the disease which caused it ever suspected. How often do we hear the same sad story from the almost heart-broken mother! How she had called the doctor's attention to the sideling and awkward shuffling gait; to the colic pains, and the crying out in the night or early morning; to the child's indisposition to run about at times; and asking, anxiously, if there was not something the matter. Many and many a time, the reply has been that it was all an idle fancy; that the child would "grow out of it." Month after month, in some instances, mothers have importuned their physician to examine a child, concerning whom they suspected something—not knowing what was wrong—before his attention could be arrested to its condition; and then, perhaps, only to find that injury irreparable had already been done.

Let me implore you, gentlemen, never to turn aside or "pooh-pooh" an anxious mother. To be sure, it may be only fancy, but then again it may not be; and it is a terrible responsibility, and not pleasant to reflect upon, if you have quieted just fears, and failed to detect a disease, which, when not discovered in time, seldom fails to result in death, or, what is often thought to be worse, incurable deformity.

It is a fact which I state with deep regret, that, at the present time, cases of disease of the spine are discovered, in many cases, earlier by non-professional persons than by physicians. Nearly all the cases sent us in the earlier stages of the disease—even before it could be discovered by a projection in the body—are sent, not by physicians, but by the parents and relatives who have become familiar with the earlier symptoms through our inquiries concerning the early history of their own children. This state of things should not be, and it need not, if the profession will but give the heed to the subject which it deserves.

If these few hints—for I have only attempted to set before you some of the more prominent points in the differential diagnosis of these cases—shall attract the attention which the importance of the subject demands, there cannot fail to be henceforth less unrelieved misery from spinal disease than there has been heretofore.

ART. II.—*Studies in Materia Medica. Arsenic in Consumption, and generally in Diseases where there is a Tendency to Death by Asthenia: its Physiological and Psychological Action.* By IRETUS GREENE CARDNER, M. D., New York.

GIVING arsenic in this class of diseases is not claimed as a new use of this powerful medicament, nor as an accidental discovery, as was Dr. Pavins's use of it in hæmorrhoids—a practice venerable with age. The ancients, believing that disease was a poison to be antidoted and expelled from the system, often made use of highly poisonous substances as remedial agents. And this would seem to be a better plan than the great Sangrado's which poor Gil Blas followed so disastrously both to himself and to his patients; for, in his copious bleedings, he was not acting on the antiphlogistic idea, but on the ancient one, that, in draining the system of blood, the loss of the humors and poisons therein contained would give relief to his patient. So he gave large draughts of warm water, that, by its solvent power, the whole system might be thoroughly cleared and rinsed of morbid material, and the same duly abstracted by further bleedings. The alchemists of mediæval time frequently commended highly poisonous substances against the ravages of age, in producing perennial youth and beauty. So did the daring navigator who felt the promptings of a poetic idea, mingled with his desire for renown and gain, urging him to seek, in unknown regions, for natural springs (mineral ?), and powerful medicaments, that would confer everlasting life, and unfailing youth and vigor.

The word alterative, as applied to a remedy based upon the idea of its power to produce a different abnormal action in the system, thus mitigating the one already prevailing, leads to a better practice, but to no clearer idea of the physiological action of the remedy used.

So the terms cerebro-spinals, arterial stimulants and sedatives, are high sounding, but, when applied to remedial agents, are not always based upon a knowledge of true physiological effects.

The Hahnemannian theory, resting upon an endless symptomatology, steers quite clear of modern physiology, and would restrict its followers, as we shall see, to but one effect, to be obtained from powerful medicaments.

I think it may be laid down as an axiom, that a highly-poisonous substance like arsenic is never used medicinally for the purpose of simply developing its toxicological effects. If it is not for this effect, for what effect is it ?

We know how promptly the organism resists any force that disturbs the equilibrium of its physiological action. It is this natural tendency to resistance and repair that constitutes the *vis medicatrix naturæ.* It must, then, be the physiological phenomena caused by this natural resistance to or reaction against a small dose of arsenic that alone is desired ; and as such phenomena may be opposed to phenomena developed by a contemporary disease in the system, the dose would thus be remedial and curative. This we may term the *reactionary* or *indirect* effect of arsenic obtained from small or minute doses. If the reactionary effect of arsenic be to develop physiological phenomena opposed to those produced by a toxic dose, then this reactionary effect would be remedial and curative for such conditions and diseases of the system as give phenomena like those produced by the toxic effects of arsenic, by arousing a latent *vis medicatrix naturæ* against such disease.

Then we can say—1. That there is an effect to be obtained from a small dose of arsenic which we term *indirect* or *reactionary.* 2. That this effect tends to cure such conditions or diseases of the system as are like those produced by toxicological doses. If this be true of arsenic, it must be equally true of all remedial agents; and we may premise—3. That two effects can be obtained from all powerful remedies: one the *reactionary* from minute doses, directly contrary to the other; the *direct*, obtained from sufficiently large doses to overcome all resistance to their action, and thus bring the system under their control. So we make the law general, that a small dose of a powerful medicine causes a resistance in the system to all the physiological and even psychological phenomena that would follow a toxic dose of the same, and would therefore become remedial, when like physiological and psychological phenomena were present and caused by disease. We recognize that it is upon the practical working of this great physiological law that the followers of Hahnemann have improvised their empirical rule, that "like cures like, and that this is the only possible way to cure." But we see, if the physician were confined to this plan of medication, how narrow must be his field of action. For, 1. He must trust to the powers of nature alone, his plan adding nothing to nor correcting any condition of the system. 2. He must be restricted to the use of such therapeutics, many poisonous, as are capable of so disturbing the system as to stimulate this physiological resistance. Certainly take from our use the direct effect of such agents as opium, mercury, belladonna, and of such agents as are only used *for* their direct or corrective effect, as iron, veratrum viride, the alkalies, the astringents, the class of *infusoriacides*, as quinine, the sulphites, etc., and how much suffering must go unalleviated, and how many lives must be uselessly lost! Yet a thorough recognition of the *direct* and *reactionary* effects of medicines may not only prevent crude and useless dosing, but will tend to more intelligent and efficient dosing.

For, when we learn to appreciate the opposite effects to be obtained from a large and a small dose of the same medicine, and that, in order to use a small dose intelligently, we must possess a thorough knowledge of the physiological and even psychological action of a large dose, it will lead the profession to a deeper study of materia medica and therapeutics; and while the use of medicines on simple experience will not be particularly discouraged, yet no remedy will be considered "introduced," until a knowledge of its physiological action is obtained. In making a practical application of these principles, clinical experience aids us, and teaches that, to obtain the direct effect of mercury, from five to ten grain doses of the mild chloride are required. To obtain its indirect or reactionary effect, the giving of small doses with opium may be discarded on sound physiological grounds, and the fiftieth or the hundredth of a grain of calomel given in repeated doses, as in infantile diarrhœa with bilious passages.

Opium, in small, repeated doses, acts as a stimulant; but exactly opposite when given sufficiently to overcome the natural resistance of the organism. If it is losing its position as a sudorific, which depends upon its stimulating properties, it is, perhaps, owing to the fact that, in order to produce and continue sudorisis, it must be given sufficiently to accumulate and produce its peculiar psychological if not its physiological direct effects, and therefore act in many cases with the disease, as in pneumonia, where a large tract of lung is involved. For the same reason, a large dose should not be given to procure sleep in acute alcoholism. In using such remedies as opium, belladonna, stramonium, and hyoscyamus, with reference to their indirect effect against psychological phenomena, in diseases of the mind and nervous system, an interesting field is opened for investigation, both as to efficiency of the agent and the size of the dose. It is not claimed that they should be used instead of, but rather in connection with, such agents as correct a state of the system dependent upon such disease, or upon which such disease may depend.

In the different varieties of maniacal hallucinations of alcoholism, I have found minute doses of opium, hyoscyamus, and especially stramonium, to act very efficiently. Undoubtedly, belladonna would be good for those kinds of mania dependent upon long-worked and overtaxed brain, or wherever a hyperæmia, especially venous, is a condition. Belladonna is so well known by its direct action to produce congestion of the venous radicles, that its disastrous effect in the eye, where glaucoma is present, is easily understood. But when it is given in myelitis to reduce congestion of the spinal cord, in whooping cough, and even in epilepsy as commended by Trousseau, it being its indirect effect that is required, it may be given in much smaller doses than generally prescribed.

It would seem that, generally in giving such remedies, the object is not to see how much of a highly poisonous substance is required to produce a healthful reaction, but rather to see how much of a given poison the patient can bear, together with the disease. Need we wonder that failure often leads to no confidence in medication, and to the adoption of the expectant method?

The prejudice of the profession against small dosing and the highly poisonous properties of aconite have caused that medicine to fall into general disuse. Aconite can only be used for its indirect effects. Its direct physiological action is displayed, most likely, by local contact, in the whole sensitive nerve periphery. Partial anæsthesia, and sudden blood-stasis, or a general capillary congestion, with a congestion of the arterial radicles, follow, and, when this numbness is sufficient in the nerve periphery of the heart-tissue to prevent reflex action, death speedily follows. This is an arterial sedative (?). Now, its indirect effect must be to relieve blood-stasis and congestion by increasing vital action in the capillaries at the same time in the whole organism. As a consequence, sudorisis, and therefore reduction of temperature, would follow. This shows that while aconite may do in febricular and local congestions, where an inflammation of an important organ is involved, it should be combined with something more efficient.

To illustrate: I once succeeded a follower of Hahnemann, in a cure of pneumonia of eight days' standing, involving a large tract of the right lung. The patient, a hale-looking man, had been treated with aconite. I observed, first, that he was in a profuse perspiration, and thought to myself that no fault could be found with the condition of the skin. But the pulse was 130, and respirations 36 per minute; and the patient had not slept, except in little dozes, sitting, for five days. Concluding that too much had been trusted to Nature, I combined with aconite, tinct. veratrum viride, bringing his pulse to 60, when he had a comfortable sleep of six hours, and awoke with respirations at 30, and every way better.

Strychnine in doses usually given in reflex paraplegia, acting cumulatively, undoubtedly cures by its direct effect. But in very minute doses it would be likely to act equally well in paraplegia, dependent upon congestion of the spinal cord, by its indirect effect. It can be thus used in conditions where there is a tendency to tonic spasm. The direct effect of *arsenious acid* on the organism is eminently disorganizing, and, tending to death by asthenia, displays a pretty uniform set of physiological and psychological phenomena. Its expends its force first upon the alimentary tract, and this seems to be elective, and not dependent upon its local effect as an irritant, as is proven by the same lesions and morbid appearances being found along the intestines and in adjacent organs when the drug is given hypodermically, as when taken by the stomach. This is an all-important observation from a therapeutic standpoint; for no medicine could have a claim to reactionary use simply on its direct local effect as a corrosive poison—this being rather a chemical than a physiological process. Arsenious acid, then, attacking the organism, at the very fountain of life, vitiating digestion, absorption, and assimilation, and at the same time hastening disassimilation, besides the general phenomena of exhaustion, cachexia, cadaveric look, local œdemas, cutaneous eruptions, etc., displays certain groups of phenomena, as the chylopoëtic, the nervous and the moral. The chylopöetic group ranges in severity from simple gastric irritation and diarrhœa, to hæmatemesis and dysentery. Clinical experience has proven that the indirect effect, say from one-drop dose or less, of Fowler's solution, will prevent vomiting when the stomach is so irritable as to bear nothing, and when light and noise would induce retching. In diseases of the bowels it is best adapted to atonic conditions, as diarrhœa of children with marasmus, chronic dysentery, and hæmorrhoids. The nervous group is such as generally attends great exhaustion and sudden shock of the nervous system, as irritable temper, and timidity; susceptibility to frights by unexpected noises, and cramps of certain sets of muscles. The mental or moral group partakes of despondency and anxiety, such as attends religious monomania, and some forms of *mania a potu.* The indirect effect of arsenious acid is already recognized as an efficient agent against the nervous group of phenomena, and would likely be equally good against the mental, where the phenomena depend upon a condition of the system. Since the experiments of Boudin, the profession have generally acknowledged its efficacy in intermitting fevers. Perhaps the dose in this case needs to be larger than when it is given for what may be termed *conditions*, when its special power in stimulating digestion and assimilation, and in restoring tone and vigor to the whole organism, is sought. In all cases, except where it is used as an antiperiodic, one-drop doses of Fowler's solution, equal to $\frac{1}{140}$ or $\frac{1}{130}$ of a grain of arsenious acid, I believe to be ample, and in many cases even less could and therefore should be used. This may sound like frivolous dosing, to some; but it must be remembered that the standard doses of the books are based upon what experience has proven can be tolerated, without reference to the quantity necessary, rather than upon a sound physiological law of what is required to produce a certain physiological result. The use of it in consumption is, I believe, based upon the same general principle of its use in other diseases—its power of arresting disorganization, and of increasing the assimilative and reparative processes. Further than this general effect on the vital processes of the capillaries, it probably has no other effect on the lung tissue. I am using it in two cases of consumption, where it has been given for six months, in one-drop doses of Fowler's solution in one case, and one-tenth of a drop in the other, three times daily. They were both seemingly hopelessly progressive cases, with every symptom of speedy fatal termination.[1] One, a young lady of Brooklyn, has simple tuberculosis, which had run a rapid course of about a year when I first saw her, and was at that time attended with amenorrhœa, hæmoptysis, exhausting sweats, and diarrhœa. Not bearing cod-liver oil nor stimulants, nor in fact scarcely any medication, she was given gallic acid—of which she has taken over a pound—in doses repeated often or at regular intervals as symptoms required, and it has been continued to the present. The constant use of gallic acid in this disease, when there is such a constant tendency to slow oozing of blood, is an old practice, and, judging from the five cases in which I have thus used it, I believe it worthy of following. Phosphorus in the form of the hypophosphites was given, and, finally, arsenic in its stead. A change was soon observed in the appearance of the countenance and skin, and in a partial arrest of the profuse "night-sweats" and diarrhœa, with better appetite and increased strength. The case is without hope, but the patient has been carried past what is considered a trying season. The other, a man middle-aged, is a case of eighteen months' standing when I first saw it, and displays the phenomena of cough, wasting, loss of strength, œdema of feet and hands, shortness of breath, with physical signs indicating bronchial consumption, added to a solidification of the base of each lung, a condition following a low course of typhoid fever. So much of the right lung is involved in this solidification, that at each inspiration there is a peculiar twisting of the body to the left. From the œdema, the ends of the fingers had become almost insensible to touch, and quite clubbed. He was at first put upon a full treatment by cod-liver oil and whiskey, for three months, with some improvement, when, his stomach loathing both, treatment by arsenic was begun, with one-drop doses of Fowler's solution. A general very marked improved condition is the result. Increase of strength, less cough and expectoration, and, in fact, every phenomenon showing that assimilation is more active, and that disassimilation is less active. The œdema of the feet and hands having ceased, the sense of touch is becoming quite natural. The great power of arsenic, by its indirect effect to arrest disorganization, is shown in this case. Physical signs, however, reveal no very marked improvement in the lungs.

---

[1] Died nine months after this treatment began. Death hastened by exposures in the country.

Art. III.—*Aneurism of the Ascending Aorta, treated by Galvano-Puncture.* By Robert D. Nesmith, M. D., New York City.

I translate, for the benefit of the readers of the *New York Medical Journal*, the following interesting observation of a case of aneurism of the aorta, occurring in the service of Sig. Ciniselli, at the hospital of Cremona, Italy.

The researches of this distinguished professor upon the chemical action of electricity upon the human body have long made his name famous among physicists. I need not, therefore, insist upon the *vis a tergo* which the authority of his name should impart to the observation in question, but quote it simply and without comment as it appears in the annals of the *Société de Chirurgie:*

Antonio R——, forty-six years of age, sound in constitution, has undergone no serious illness, except an arthritis, complicated with endocarditis, in 1863. Cured of this affection, he changed his occupation of postilion to that of coachman. In 1866 he began to feel pains, accompanied by pulsations, in the right side of the chest, besides a feeling of lassitude and impediment in the exercise of his occupation as driver.

To these symptoms, which became more and more marked, were added, at the commencement of the past year, dyspnœa and occasional loss of consciousness. At the same time, the pulsations became sensible to the touch through the walls of the chest, which bulged in the form of a tumor at the affected point. Finally, the loss of sleep, and the impossibility of working, and of lying down, induced the patient to enter the hospital of Cremona, July 24, 1868.

The patient standing erect, there was perceived, to the right of the sternum, a rounded tumor, elevated from one to one and a half centimetres above the level of the chest, and extending about six centimetres transversely, somewhat less vertically. This tumor was formed by a curve limited to the third and fourth ribs and the third intercostal space, nearly doubled in extent.

The two ribs presented no other appreciable alteration;

pulsation could be distinctly perceived through them, especially through the third, which was more curved than the other. In the centre of the intercostal space the pulsation was quite strong. When the patient assumed the horizontal position, the tumor became less elevated, the intercostal space less in extent, and the pulsation feebler, accompanied, how ever, by a soft blowing sound. The pulsation was also extremely sensible to the touch in the second intercostal space, but not in the fourth. No derangement in the circulation or respiration was to be observed, except such as necessarily resulted from the pressure exercised by the aneurismal tumor upon the right lung. The obscurity of the pulsations, when sought for posteriorly, the absence of alteration in the voice and in the circulation of the jugular vessels, naturally suggested that the development of the aneurism was limited interiorly. In other words, that the external tumor fairly measured the extent of the aneurism.

From the consideration of the above symptoms, Prof. Ciniselli diagnosticated an aneurism of the lateral portion of the ascending aorta. It was decided to operate by galvano-puncture, and the operation was accordingly performed, July 30th, in the presence of the entire medical corps of the hospital. Three needles of polished steel, one millimetre in diameter, were plunged into the third intercostal space; the first at the distance of one centimetre and a half from the sternum, the others still farther from the median line, and about two centimetres apart; they were all three violently shaken by the pulsations of the aneurism. The electric current was derived from a Voltaic pile of thirty couples, having the dimensions ot ten centimetres square, and in which the exciting element was a saturated solution of sea-salt. This is the apparatus with which Dr. Ciniselli has had the least number of accidents, especially those which result from phlegmonous inflammation. In order to avoid eschars caused by the chemical action of the current—the most redoubtable accident in galvano-puncture—the operation was begun by applying the positive electrode upon one of the needles, and the negative electrode near the tumor, upon the skin, by means of a pledget saturated with salt-water. The positive electrode was then transferred to the other needle, and the negative to the needle which had already been submitted to the action of the positive pole, and so on; so that each needle had been placed in communication with both poles. The oxidation of the needles by the action of the positive pole, and the oxygenation of the blood, which manifests itself by a little dark ring around the wound, insures sufficient insulation for a limited application of the current; a result which has been vainly sought by the interposition of layers of insulating substances. This fact has been demonstrated by many observations and clinical experiments.[1] The shifting of the electrodes from needle to needle was so managed as to avoid subjecting the patient to unnecessary shocks.

Experience has shown that, in order to profit by the insulation of the needles, produced by their oxidation under the action of a battery of sufficient tension to cause coagulation of the blood, the application of the current should be limited to five minutes for each needle. It is also prudent, in order to avoid the danger of too great reaction, not to prolong the operation beyond half an hour.

On this occasion, however, it was suggested by one of the gentlemen present that an electric clot might become detached from the mass, in the process of coagulation, and be carried into the torrent of the general circulation, thus exposing the patient to the danger of embolism. Acting upon this consideration, the operator prolonged the application upon each needle beyond the accustomed time, and even to ten minutes upon the two needles nearest the sternum, with the view of bringing about a firmer adherence between the electric clots and the walls of the aneurismal sac. This practice, while guarding against embolism, nevertheless occasioned electro-chemical cauterizations at the level of the two punctures; but, as they were superficial, nothing serious resulted from it. Altogether, the current was applied for forty minutes. The skin covering the tumor was red and tumefied.

---

[1] See Ciniselli's "Études sur la galvano-puncture dans la traitement des anéurismes," 1856; "Études sur l'action clinique de l'électricité sur les tissues vivants," 1862; and the "Résumé des Études," in the *Gazette Médicale*, 1866.

The extraction of the needles, which was done at once, was somewhat difficult, as well as painful, owing to the adherence which, during their oxidation, they had contracted with the adjacent tissues. In spite of the precaution taken to depress firmly the skin while extracting the needles, a certain amount of blood escaped into the cellular tissue. There was no escape of gas. The arterial hæmorrhage, unimportant in amount, yielded promptly to the application of a compress saturated with lead-water, and a bladder filled with pounded ice. Ice-water was given the patient to drink.

The burning sensations which had attended the operation ceased soon afterward. The pulsations of the tumor returned to their ordinary state, so that the patient regained his composure.

On examining the needles and their oxidation, it was seen that the one nearest the sternum had penetrated to the depth of a centimetre and a half into the aneurismal cavity, having traversed solid tissues two centimetres in thickness, as was proved by the greater oxidation at that point. The second needle penetrated as far as three centimetres and a half within the cavity of the aneurism, having traversed tissues only one centimetre in thickness. The third, or most external, needle penetrated to the depth of two centimetres and a half into the aneurismal sac, having traversed tissues two centimetres in thickness.

The operation was not followed by general reaction; the local reaction, characterized by the swelling and redness of the skin, subsided under the continued application of ice during the first two days, and of lead-water continued for some few days longer.

The effusion of blood into the cellular tissue, and all local reaction, disappeared six days after the operation, when the tumor was found to be reduced in projection nearly to the level of the walls of the thorax. The third rib alone preserved the curve which it had acquired; pulsation through it was feeble and obscure.

At the third intercostal space pulsation was likewise feeble and more deeply seated than before the operation; it was also scarcely perceptible through the fourth rib. The most encouraging immediate result of the operation, however, was the assurance on the part of the patient that all difficulty in breathing had left him, and that he could rest comfortably both upon the back and sides, preferring, however, the right side. He had regained both sleep and comfort, things which had been for two months denied him.

In spite of this satisfactory state of things, the patient was ordered to keep his bed for three weeks, digitalis being exhibited to moderate the force of the circulation, while, at the same time, he was placed upon a strong meat diet, with the view of supplying to the blood the plastic elements necessary for the formation of a clot capable of filling the entire cavity of the aneurismal sac.

At the expiration of that time, on examining the patient in the erect posture, the tumor was perceived to be slightly more elevated, the pulsation was visible and less deeply seated in the third intercostal space; the bellows sound was nearly the same as before the operation. The amelioration in the patient's condition persisting, he left the hospital, September 11th, forty-three days after the operation.

September 26th (fifty-eight days after the operation).—The patient having presented himself, it was noticed that the curve of the third rib was reduced nearly to the normal state; the tumor had consequently disappeared, leaving but a slight tumefaction, upon which the eye no longer distinguished pulsations; these last were, however, still sensible to the touch at the level of the third rib and of the intercostal space, but more deeply seated than before; the bellows sound is much more obscure, confounding itself with the vesicular murmur. The patient continues to live comfortably, maintaining a nutritious diet; he complains only of general pains, more particularly in his limbs—doubtless the result of the arthritis, which has never entirely left him.

October 4th (sixty-six days after the operation).—The patient has improved in flesh and in strength. Examined shortly after having taken a walk of over a mile, he feels neither pain nor difficulty in breathing. The pulsation is still sensible to the touch in the third intercostal space, but more deeply seated than before. The bellows sound has nearly disappeared; the vesicular murmur can be more plainly distinguished through the tumor. From all these changes we are led to suppose that the aneurismal sac is nearly filled with clots, and that the still perceptible pulsation should not so much be attributed to the movement of expansion and contraction of the aneurism, as to the impulse which the tumor naturally receives from the aorta.

October 12th (seventy-four days after the operation).—The patient feeling entirely restored, and tired of doing nothing, resumes his previous occupation.

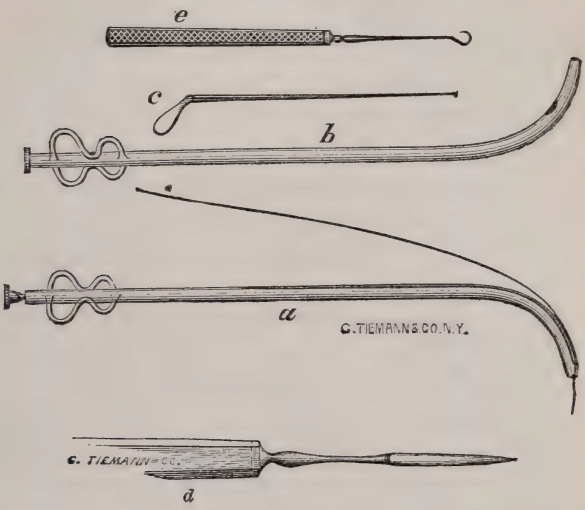
Clinical Records from Private Practice.

I.—*External Perineal Urethrotomy.* By JOSEPH CREAMER, M. D., Brooklyn, E. D., New York.

PROF. VAN BUREN in his "Contributions to Practical Surgery," says very justly: "As the true value of any surgical operation can only be arrived at by comparing and digesting the results of a large number of instances in which it has been performed, it would seem the duty of individuals to place upon record plain and truthful accounts of such cases as fall within their observation, in order that each may contribute his mite to the mass of experience from which only correct final results can be deduced."

Influenced by this consideration, I am induced to submit to the profession the following case: U. N., aged 66, born in Germany, presented himself at my office in August, 1868, complaining of difficulty in passing his urine. He had gonorrhœa twenty-five years ago, and, from that time until he came under my care, has had more or less trouble in micturition, several times amounting to complete retention, which he usually relieved by warm baths and opium. At intervals during this long period he was occasionally subjected to the passage of instruments, which invariably caused severe pain, and, upon withdrawal, subsequent hæmorrhage. On one occasion the introduction of an instrument was followed by orchitis, which confined him to his bed for several weeks. During the day, as well as at night, he is frequently disturbed by a desire to micturate, and he passes his urine by drops, assisting the act by stripping the urethra. The character of the fluid voided indicates cystitis, which, from the duration of his urethral trouble, must doubtless exist as one of the sequences of his long-standing narrow stricture. After repeated and careful attempts made at intervals of three or four days, I completely failed in introducing the smallest instrument into the bladder, a capillary whalebone bougie being arrested at six and one-eighth inches from the external meatus. I advised him, in consequence of my inability to manipulate an instrument beyond the point of stricture, to consult my friend Prof. Gouley, of the University Medical College. To his clinical clerk, Dr. Ludlum, I am indebted for the following extract from his notes of the case :

"September 24, 1868, examination revealed a slight diaphragmatic stricture one-quarter of an inch from the meatus. A No. 8 bulbous bougie is arrested four and one-eighth inches from the external meatus ; a capillary whalebone bougie is arrested by engaging in a lacuna four and half inches in, but subsequently it passed six and one-eighth inches, where it was finally arrested." At a subsequent examination, October 1st, after injecting the urethra with oil, "the capillary whalebone bougie passed six and three-eighth inches; a soft capillary bougie six and five-eighth inches." After this he passed urine more freely than for a long time previous. "Examination per rectum found the prostate considerably enlarged, especially in the right lobe, but of normal consistence. Bladder not distended to an unusual degree, but highly irritable." In view of approaching organic trouble of the kidneys, and impending retention, which at any moment might occur, I advised the gentleman to submit to an operation; this advice was fully concurred in by Prof. Gouley, but the idea of an operation seemed to impress him unfavorably, so that I lost sight of him until January, 1869, when, matters becoming worse, he sent for me to carry out my original intention. Dr. Krackowizer, of New York, saw the case at this time with me. The doctor failed in passing the capillary bougies beyond the point of stricture. After learning the history of the case, the unavailing efforts to pass the stricture, the consequent impossibility of accomplishing any thing by dilatation, he was satisfied of the inevitably fatal termination of the case if the patient remained unrelieved, and without hesitation he advised the course already agreed upon by Prof. Gouley and myself.



Operation.—On Sunday, January 31, 1869, I performed external perineal urethrotomy in presence of Profs. W. Darling and J. W. S. Gouley, of the University Medical College, Ernest Krackowizer, M. D., one of the surgeons to the New York Hospital, and Drs. Feely, Schuler, and Giroux.

The perinæum being shaved, and the patient fully under the influence of ether, the urethra was injected with olive-oil, to facilitate the passage of a capillary whalebone bougie which was introduced as far as possible to serve as a guide for the catheter staff (see woodcut, *b*), an instrument devised by Prof. Gouley. The staff was carried on over the guide until it pressed against the face of the stricture. The instrument is grooved on the convex surface, and on the curved extremity is bridged so as to convert the groove into a foramen, to enable the operator to pass it over the capillary guide. The groove in the staff is continued upon the bridge without at all lessening the utility of the latter. The patient being now placed in the usual position for lithotomy, Dr. Krackowizer holding the staff, I made an incision with an ordinary scalpel, commencing at the base of the scrotum, and continued in the median line down to within half an inch of the margin of the anus, dividing the skin and cellular tissue. Feeling for the groove in the staff, I next opened the urethra and passed through its sides a needle armed with a double thread, one strand of which was drawn centrally outward by the minute hook (see cut, figure *e*). The strand was then divided, constituting the loops for holding apart the urethral walls first suggested and practised by Mr. Avery, and revived in this country by Prof. Gouley. The staff being now withdrawn to the extent of about a quarter of an inch, search was made for the opening in the stricture, which (if the capillary guide be engaged in it) will be at once recognized, and the usual steps taken to enlarge it, but in this instance the guide had not entered the orifice of the stricture. Being provided with several small grooved directors such as represented in figure by letter *c*, I succeeded in introducing one into the stricture, and, by using the minute probe-pointed knife *d*, divided the stricture in its whole length, and to an extent sufficient to allow me to pass a straight lithotomy bistoury half an inch beyond the posterior point of contraction. The capillary bougie was now introduced, guided by the groove in the probe, into the bladder, through the perineal wound, and over its free extremity the staff easily glided into the organ. A free flow of rather turbid-looking urine proved satisfactorily that the right direction had been taken, and the end accomplished. The external meatus being too contracted to admit a No. 14, I incised it with the *bistourie cachée* of Civiale, and easily passed Nos. 15 and 16 before the patient's removal from the operating-table.

He was now placed in his bed, well blanketed, and, when sufficiently recovered from his anæsthesia, was directed to take ten grains of quinine and a quarter of a grain of morphine. *No catheter was tied in the bladder;* the after-treatment consisting principally in the introduction of a sound every third day. No chill or "urethral fever" ensued. Having succeeded in teaching him the proper use of a sound, he is now passing a No. 16 once a week, in order to preserve dilatation of the urethra, a method employed in 1730 by Ledrau, the necessity of which has been fully confirmed by most surgeons since his time. The patient is now doing well, the return of his difficulty in a great measure resting with himself, because the faithful introduction of his sound weekly will without doubt preserve him from future annoyance, whereas neglect on his part might possibly be followed by most disastrous consequences. As far as my knowledge extends, this is the oldest case on record of a successful termination under the circumstances already enumerated, viz., age, duration of stricture, and cystitis.

REMARKS.—In heading this article External Perineal Urethrotomy, I am induced to do so by the impression it made on my own mind upon first hearing the expression read from a paper which Prof. Gouley produced at the last meeting of the New York State Medical Society. It is a term which can lead to no confusion of ideas, in connection with the operation, such as external urethrotomy, perineal section, and perineal urethrotomy are apt to give, and, besides, it distinctly distinguishes the operation from that usually known as Syme's. External urethrotomy may mean opening any portion of the urethra anterior to the scrotum; perineal section, an incision in the perinæum extending through skin and cellular tissue, and perineal urethrotomy could be done internally, so that the term External Perineal Urethrotomy expresses distinctly and without qualification the opening of the urethra from without in the perineal portion or region, and it is without doubt the most elegant because the most expressive term for the operation.

The fact of leaving no catheter in the bladder may be a matter of surprise to those who have not given the subject sufficient thought, or who allow themselves to be governed entirely by the directions laid down by European authorities. That the practice of tying in a catheter is still followed by our European brethren, after the case recorded by Mr. Spence, and in language which at once "conveys the danger of such a proceeding," to me is completely inexplicable. Mr. Spence thus writes to Sir Henry Thompson: "The only fatal case I have recorded ought not to be attributed to the operation, for a catheter retained in the bladder might have produced the same result." The patient of Mr. Spence went on favorably for forty-four hours after the operation, urine passed freely by the catheter, no irritation existed about the wound, but he complained of severe pain in the hypogastric region. The catheter was removed, and an opiate given, which temporarily relieved him, but unfavorable symptoms continued in spite of active treatment, and the patient died ten days after the operation. The *post mortem* revealed that a thickened bladder, with, of course, diminished capacity, had contracted on the point of the catheter, and had caused ulceration and perforation of its mucous coat. The whole thickness of the organ was not perforated, nor was there abscess or infiltration, but the peritoneal coat was inflamed, and the whole peritoneal sac presented symptoms of intense recent inflammation. That the bladder was not completely perforated was owing to the early removal of the instrument. It is supposed that leaving a catheter in the wound prevents the contact of urine with the recently divided tissues, and facilitates the process of healing, besides preventing the dangerous consequences (a bugbear, of course) that might arise from contact of urine with a recent wound. Who ever attributed a death after lithotomy to urine dribbling over the perineal wound, or supposed for one moment that the healing of the wound was in consequence retarded? Experience proves the contrary, and in the very case of Mr. Spence's related above, eight days after the withdrawal of the catheter, "the parts in the perinæum were nearly healed, lymph closing the urethral wound almost entirely."

To Prof. Gouley the profession is indebted for first calling attention to the practice of avoiding a procedure so fraught with danger. For, if we think one moment on the condition of the bladder after long-standing and very narrow stricture, we can conceive of no more favorable train of circumstances to materially facilitate the entrance of the point of a catheter, through the whole diseased structures, and its final passage into the peritoneal cavity. He first adopted the plan on a patient in December, 1860; but, as I understand he is about publishing a complete history of his varied and very extensive experience, I shall omit further allusion to the case that first induced him to propose a practice now recognized in this country by all surgeons of any experience in urethral difficulties, and cannot do better in this connection than quote a well-deserved tribute to his merit of priority in this particular, from a lecture delivered at the University Medical College, by Prof. W. H. Van Buren, and published in the *New York Medical Record*, June 15, 1866. After reference to the practice of not tying in a catheter, Dr. Van Buren concludes by saying: "These, then, are the considerations by which I am induced to recommend you to adopt a practice different from that usually advised, after division of a stricture of the urethra from the perinæum. It remains for me to demonstrate to you by the results of actual practice that it possesses the advantages I have claimed for it. Besides the case of the boy now before you, which in regard to this point of treatment furnishes the most satisfactory evidence, Dr. Gouley, who, as far as my knowledge extends, was the first to adopt this practice, has also employed it with equally favorable results in other cases."

The catheter-staff and whalebone capillary guides also belong to the same gentleman, and in fact the advances made for the past ten years in this country, in the surgery pertaining to the urethra, are inseparably connected with his name. The staffs are very well shown in the cut; one represents the grooved convex surface with guide, the other the concave, with catheter-eye on surface. It is quite unnecessary for me to show the superiority of the staff over any other now in use; the fact, that, after a stricture is divided and the instrument passed over the guide, and onward into the bladder, the stylet then withdrawn, urine is seen to flow freely after an operation not always the most easily executed in surgery, is, I think, sufficient evidence, and to my mind the most convincing point in its favor.

As to the guides, with delicacy of touch, a thorough knowledge of the urethra, patience, and perseverance, will in about three months give to a surgeon of ordinary capacity manipulative ability to use them skilfully, and with a fair amount of success, unless his mind is warped by age or prejudice, and then no amount of practice will completely qualify him for their use, but it is fair to conclude that under such circumstances he will hardly be likely to use them at all.

The loops for holding apart the sides of the urethra, I look upon as one of the most important adjuncts in the operation; they constantly recall to you the median line; in fact, they are buoys in a dangerous channel, and will always be found serviceable not alone on account of being the most convenient and elegant method for holding the urethral walls apart, but they refresh you as to the situation of the urethral canal, through what may prove, before ended, a very difficult and very tedious operation.

After almost any interference with the urethral canal, the passage of a sound, introduced in the most delicate manner (and it should be introduced in no other way), in some constitutions is followed by a train of symptoms known as urethral fever. As such a condition, following after so grave an operation as I have described, might possibly usher in more serious results, I was induced to give quinine immediately after the operation as an anti-periodic, upon the principle one would act on in anticipating the cold stage of an intermittent. That it acts admirably I have reason to congratulate myself, but of its *modus operandi* I know nothing, and would refer for information on this point to the published experience of practitioners in malarious districts, who give the remedy to persons about being exposed to the miasmatic influence, and with unquestionable success as far as I am informed; for in many instances that I remember of recorded cases, those not taking the quinine were in a short time after exposure attacked with malarial fever, while the cinchonized escaped the visitation. I understand that Dr. Gouley prepares his patients a week or ten days before operating, by keeping them under the influence of quinine, and has done so for the past year.

To the gentlemen present my thanks are due for valuable assistance, and in an especial manner to Dr. Krackowizer, for his management of the staff.

II.—*Cases of Dyspnœa relieved by the Inhalation of Oxygen.*

By Andrew H. Smith, M. D., New York, Lecturer on Materia Medica and Therapeutics at the Long Island College Hospital.

Case I.—James Bosher, a native of Ireland, aged twenty-seven, was admitted into the New York Hospital December 17, 1868. The history of his case (for notes of which, as well as of Cases II. and III., I am indebted to the courtesy of Drs. Buck and Bulkley, of the hospital staff) was that of pulmonary emphysema, from which he had suffered more or less since childhood. His condition on admission is thus described in the hospital case-book: "General condition poor; breathing performed with difficulty; lips blue; has a dusky countenance; face a little bloated; feet and legs somewhat swollen, and pit on pressure; hands and feet cold; inspirations wheezing; heart beats heavily and rapidly."

This was substantially his condition when I saw him on the 29th of December. He was cyanotic to a marked degree, and the veins of the neck were swollen and tortuous, resembling varicose veins of the leg. Respiration 36, very laborious; voice husky, and interrupted with each inspiration. Pulse 122 and small.

By invitation of Dr. Draper, the Attending Physician, I administered four gallons of oxygen gas, permitting the patient to inhale at the same time about an equal volume of atmospheric air. The result is thus described in the hospital case-book:

"*Dec. 29th.*—Oxygen administered by inhalation; great relief to the patient. Lips became quite red, face assumed a lighter color; respirations reduced from 36 to 20, pulse from 122 to 100."

The dyspnœa was completely relieved for the time being, but soon returned after the gas was discontinued. The same quantity of oxygen was again administered, after the lapse of an hour, with a similar effect. As the nature of the disease was such that no permanent benefit could be hoped for, the gas was administered only as an experiment, to test its power of relieving dyspnœa.

Case II.— —— Saunders. This was also a patient in the New York Hospital, in the wards of Dr. Draper. He was suffering from a paroxysm of spasmodic asthma at the time of the experiments described in Case I. He was sitting up in bed, breathing with great difficulty, the shoulders being elevated with each inspiration, and the face covered with perspiration. Pulse 112; respiration 26.

Four gallons of oxygen were inhaled, with the effect of relieving the dyspnœa almost entirely. The perspiration disappeared from the face, the pulse fell from 112 to 102, and the respiration from 26 to 22. The spasm of the bronchial tubes, however, was not relieved, and soon after the administration of the gas was suspended the dyspnœa returned with its former severity. Still it was plain to all that, by a continued exhibition of the oxygen, the condition of relief could have been indefinitely prolonged until the paroxysm passed off of itself or yielded to the use of antispasmodics.

Case III.—Henry Schlammermeyer, aged twenty-seven, admitted into New York Hospital, February 16, 1869.

This was a case of acute rheumatism upon which meningitis supervened. The following is an extract from the case-book of the hospital:

"*Feb. 23d.*—At half-past eight last evening, it was noticed that the patient was sleeping heavily and breathing stertorously. Pupils dilated and irresponsive to light. Patient insensible, and cannot be roused. Pulse full and rapid; breathing 24 to the minute. Face livid. Patient was wet-cupped on the temples, and 12 ozs. of blood drawn. Ordered stimulating injection, no effect; repeated, good passage brought away; two drops of croton-oil placed on the tongue. Patient roused slightly under the above treatment, but soon sank back again. Dry cups to the chest and sinapisms to the abdomen. Patient continued insensible. At eleven o'clock, four gallons of pure oxygen gas were administered, with the effect of reducing the pulse from 140 to 120 beats per minute. Oxygen repeated five times, with the effect each time of reducing the pulse from 20 to 30 beats per minute, and improving the respiration. Pupils contracted a little, and became somewhat responsive to light, and the eyes followed the candle when moved. Ordered injections every two hours of beef-tea and whiskey. Still patient continued to sink, remaining comatose to the last, chest filling with râles, and at four A. M. he died."

The diagnosis of meningitis with serous effusion was confirmed by the autopsy.

CASE IV. is presented in the following extracts from a letter from Dr. S. W. Roof, of this city:

"NEW YORK, *March* 2, 1869.
"213 West Forty-second Street.

DR. ANDREW H. SMITH:

"MY DEAR DOCTOR,—Yours of the 16th of February, requesting particulars in reference to the use of oxygen in my brother's case, was duly received, and I beg pardon for my delay in replying.

"My brother first exhibited signs of tubercles about three years ago, the disease then appearing in the upper part of the right lung; and from the confining nature of his business—that of banker—advanced almost steadily.

"On the afternoon of the 9th of February, I was called in haste to see him. I found him propped up in bed with pillows, and suffering intensely from dyspnœa. The fingers and lips were purple; pulse 140, and very feeble; respiration very much hurried; throwing his arms about, and rolling his head from side to side, vainly endeavoring to get sufficient air.

"Auscultation at this time revealed, in addition to a large cavity in the left lung, crepitating râles all over both lungs, denoting an accumulation of fluid in the capillary bronchial tubes. The expectoration was scanty, and consisted of frothy mucus.

"Dr. James L. Little was called at this time, and advised stimulants to be given; but, deglutition being almost impossible, on account of the frequency of respiration, only a small quantity was taken.

"He remained in about the same condition until next morning, when Dr. Little suggested the use of oxygen, and, as we had both witnessed your method of administering the gas, we requested your attendance.

"As you will probably remember, after inhaling the gas for a short time, he attempted to change his position in the bed, and this slight muscular exertion brought on a very distressing paroxysm. As this was the most severe one through which he had passed, he attributed its severity to the gas.

"For this reason the inhalations were suspended until afternoon, when he again desired the gas. It was now administered as rapidly as I could generate it, with your apparatus, for about seven hours, until accident to the flask deprived me of the further use of it.

"I think it would be difficult for me to give an exaggerated statement of the relief afforded by the oxygen at this time. The pulse became stronger and less frequent, being reduced from 140 to 118 per minute; the lips resumed their natural color, and he expressed himself as feeling greatly relieved. During the time he was inhaling the gas he seemed to be very comfortable; but, when from any cause the inhalations were suspended, he would urge us to hurry and give him the gas again.

"The accident to the flask, mentioned above, occurred about ten or eleven P.M., and, as I was unable to procure another one, no more gas could be given. From this time he gradually sank, and died about eleven A.M. of the 11th. . . . . . .

"Conscious as we all were of my brother's intense suffering for twenty-four hours, and then witnessing the relief afforded by the gas, we could but feel deeply grateful for the means of thus soothing his pathway to the grave. . . . .

"I remain, yours respectfully,

"STEPHEN W. ROOF, M.D."

In connection with the foregoing cases, I would call attention to one previously reported, by Dr. J. C. Acheson, in the *American Medical Times* of November 17th, 1860. In this case I administered the gas successfully for the relief of dyspnœa depending on cardiac disease.

These cases, in no two of which the difficulty of breathing arose from the same cause, strikingly illustrate the value of inhalations of oxygen for the relief of dyspnœa. The tonic and alterative effects of the gas, however, promise to be even more valuable.

III.—*Repeated Rupture of Umbilical Cord above Point of Ligation: Death.* By M. V. B. HOWELL, M.D., Moulton, Iowa.

Feb. 3, 1869.—I was called to attend Mrs. L——, aged about thirty-five, in her sixth confinement; of robust constitution and condition good, except general anasarca during latter months of gestation. I arrived at half-past two o'clock P.M., found her in first stage of labor, vertex presenting in first position. The labor progressed regularly, and at half-past six P.M. she was delivered of a large (weight twelve pounds) and apparently healthy son. Nothing unusual occurred during the whole labor, save that the second stage was very severe, owing, as I supposed, to the large size of child. It was, however, terminated without any untoward symptoms. The pulsation in the cord being unusually strong, I postponed ligating it until after I delivered the placenta, which occupied twenty-five or thirty minutes. I then ligated and severed it in the usual way, and left both mother and child in good condition. Early the next morning, however, I was summoned to see the child, the messenger stating that the babe was bleeding to death. Being only one mile distant, I arrived early, and found the garments of the child saturated with blood. Upon examining cord, I found ligature tight and secure; but, on closer examination, I found the cord ruptured above the ligature. As the hæmorrhage had ceased to flow, I applied another ligature above the ruptured point, and left the patient, with directions, in case bleeding should again occur, to send for me at once. I heard nothing from it till the day following. In the evening I was again summoned to see it. I arrived at nine P. M., but too late, the child having died a few minutes previous to my arrival. Upon examining the cord, I found both ligatures securely tied, but a second rupture had occurred close up to the umbilical ring. I was informed that the bleeding recurred a few hours after my previous visit, but ceased again; and then in three or four hours returned again, and continued thus to recur at intervals until death, which occurred solely from loss of blood. The case during this time had been in the hands of some old ladies, who had been called in to take charge of it; they did not send for me, as they said they did not expect to find me at home.

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, March 1, 1869.

DR. GEO. T. ELLIOT, Jr., President, in the chair.

AFTER transaction of the usual preliminary business, and the reading of the reports of committees, a paper was presented by Dr. F. D. Weisse, entitled "Lister's Antiseptic Treatment in Surgery." This paper is published in full in the *Medical Record*, and we therefore present only a summary thereof.

After stating the object of the paper, the author gave an historical sketch of the introduction of the antiseptic treatment of wounds, accrediting Mr. Lister, of Glasgow, with the chief merit of originating and perfecting this system of treatment—although he had been anticipated by many in the use of carbolic acid, for its antiseptic qualities.

The mortality of surgical cases is generally due to one of *four* general causes:

1. Shock from injury or operation.
2. Consecutive inflammation with sequelæ of injuries and operations (profuse suppuration, pyæmia, etc.).
3. Heterologous formations (cancer, etc.).
4. Degenerations of tissue which destroy the integrity of organs, such as calcification and atheroma of the coats of arteries, leading to gangrene, aneurism, etc. The second of these general causes is the most prolific source of mortality in surgical practice.

The cause of all these disturbances in surgical cases is usually, in the opinion of Mr. Lister, the irritating and poisoning influence of decomposing blood or sloughs. The essential cause of suppuration in wounds is decomposition, brought about by the influence of the atmosphere upon blood or serum retained within them, and, in the case of contused wounds, upon portions of tissue destroyed by the violence of the injury.

Proof of this is obtained from the fact that, within twenty-four hours after the accident, the colored serum which oozes from wounds is already distinctly tainted with the odor of decomposition, and during the next two or three days, before suppuration has set in, the smell of the effused fluids becomes more and more offensive.

These putrid fluids may be absorbed and so give rise to constitutional irritation—the term so generally employed to express the infection of the system from the absorption of poisonous materials.

Microscopical examination of the atmosphere shows conclusively that it contains innumerable germs of living bodies, and the varied experiments, by Pasteur and others, prove that to the presence of these germs in fluids decomposition is due Prevent these germs absolutely from entering fluids, and no such thing as fermentation or decomposition can take place. Thus the old idea that putrefaction was effected by the oxygen of the atmosphere is exploded.

From this we now know that the unhealthiness of crowded hospital wards is due principally to the presence of these germs in the atmosphere.

The claims of antiseptics in surgery are based upon the fact that they have the power of destroying these germs, and thus rendering the air free from septic influence upon wounds.

The power of sulphurous acid in preventing and arresting fermentation and decomposition has long been an established fact. To Polli, of Milan, we owe its therapeutical application. The virtues of chloride of zinc have been advanced by Mr. Campbell de Morgan, of the Middlesex Hospital, London. The sulpho-carbolates of soda, etc., have, of late, been brought forward as more efficient than sulphurous acid preparations, by Mr. Arthur E. Sansom. Carbolic acid outrivals them all, however, as a general local application in surgical practice.

The advantages which Mr. Lister finds that carbolic acid possesses are:

"1. It is a most potent poison to the low forms of life which determine putrefaction, and it retains this power, even though diluted to such a degree as to be almost entirely unirritating to the tissues of the human body.

"2. It is volatile, and its vapor is quite efficacious as an antiseptic upon the air in the vicinity (of wounds).

"3. It is a local anæsthetic, and exercises a most soothing influence upon a painful wound.

"4. It is soluble in a variety of liquids of very different properties—and each of these solutions has its own special value in practice."

The preparations of carbolic acid which have been employed by Mr. Lister have been of various strengths, ranging from the pure acid (liquefied crystals) to a dilution in the proportion of one part of the acid to forty parts of a suitable solvent or vehicle. The glacial or crystalline form is used in all his preparations. (It is solid at ordinary temperatures, but melts readily when heated, or when a little water is added to the crystals.)

In his earlier cases of compound fractures, etc., Mr. Lister used the pure acid (deliquesced crystals); but he renounced it, because it induced too much unnecessary irritation, increasing discharge, and thus retarding cicatrization.

The materials used in the present system of treatment are liquid and solid preparations of carbolic acid, and pieces of block-tin, tin-foil, etc.

Liquid solutions: 1. In water; 2. In oils or glycerin; 3. Alcohol.

Solid preparations: Paste or putty; 2. Plasters; 3. Ligatures.

LIQUID SOLUTIONS.

1. In water: "Water dissolves but a small portion of the acid, only 1–20th part of the pure crystals, and holds that small quantity very loosely, so as to permit it to act with energy on any substance for which it has stronger attractions, and also to become dissipated by exposure." It is applicable as a wash to the interior of recent wounds, whether the result of accident or operation.

2. Oily solutions. (Linseed and olive oil, glycerin.) "The fixed oils have so strong an affinity for the acid, that they will mix in any proportions with it, and hold it so firmly as not to permit it to act with much energy on the tissues, or to become dissipated into the atmosphere."

3. An *alcoholic solution* of one to four has been used. Alcohol readily dissolves the acid crystals, almost equal to the oils; but, like the watery solution, it holds it but loosely. For this latter reason it is applicable to the surface of wounds, etc., especially those that have been exposed for several hours after injury.

SOLID PREPARATIONS.

1. Paste or putty.

This is an oily application made to assume a solid form. Linseed-oil, four parts, carbolic acid (crystals), one part, enough common whitening to form a paste of the consistence of glazier's putty.

2. Plasters.

These are made with olive-oil, litharge, beeswax, and carbolic acid, one to ten, one to twenty, and one to forty.

They are reliable, retaining their virtues for many hours. As an external dressing or guard, they shed the discharges freely, and keep all underneath antiseptic. They possess some disadvantages, and have more recently been superseded by what Mr. Lister calls the *antiseptic lac.*

It consists of shell-lac with which carbolic acid will mix in any amount by aid of heat; when mixed in right proportions it may be spread, when cool, on calico. In this manner a large quantity of the antiseptic is stored up. It is not softened by the discharges. By brushing over the surface with a weak solution of gutta-percha in bisulphide of carbon, it is rendered non-adhesive. We have in this a durable and perfectly reliable antiseptic external dressing or guard, and at the same time a light and neat one.

3. Antiseptic Ligature.

This is prepared by steeping the silk thread for two hours in strong fluid carbolic acid, prepared by adding a small proportion of water to the crystals. This ligature is applicable to the deligation of main arteries in their continuity, or arteries on the face of a stump or wound.

The antiseptic curtain is a piece of muslin saturated with oily solution of carbolic acid, under which cavities are punctured, to prevent regurgitation of any air except that which has been deprived of its germs by being filtered through a carbolic acid vapor. The antiseptic guard is the external antiseptic dressing, which is a reservoir of the acid, to be replenished from time to time, preventing the introduction of septic germs to the wound, and yet allowing the discharge to flow out under it.

In the manipulations required in carrying out the antiseptic system of treatment, we must ever bear in mind the existence of septic atmospheric germs, and be particularly careful in not allowing the air to have access to the surface of a solution of continuity or cavity before it has been filtered through an antiseptic dressing.

The watery solution should be freely applied to all wounds of whatever character. In compound fractures, care should be taken to have the solution penetrate to all the recesses of the wound; during and after the performance of all surgical operations, the cut surfaces should be washed with it.

The alcoholic solution is to be used in the same cases when some hours have elapsed between the solution of continuity and the application of the antiseptic.

In the performance of operations, all the instruments, probes, knives, etc., should be dipped into a solution one to four of olive-oil before being used. If the operation involves the opening of a joint or serous cavity, drop a one to four solution in the track of your incisions.

In external wounds opening into the pleura or peritonæum, a solution one to four may be introduced by strips of lint into the cavity.

Dr. Weisse closed his paper by a summary of the modifications of our pathological views, which in his estimation were forced upon us as the results of the antiseptic method of treating wounds, and he also gave a *résumé* of the various applications of this method.

Dr. E. R. Squibb was called upon by the President, and remarked: I have some knowledge of carbolic acid, which I may add to that given in the very interesting paper we have just heard. I confess to a strong prejudice, since first reading Mr. Lister's articles, against what I have regarded as a needless complication of a simple method already well known. Moreover, Mr. Lister's honesty and earnestness grew into fanaticism, and led him to exaggerate and over-dose. At first he was inclined to use the undiluted acid in wounds; but he has now got down to two per cent. in water, and finds this strong enough.

We have been misled a little in the use of the crystallized substance known as carbolic acid. The term has ordinarily been applied to three associated substances, phenyl-alcohol, cresyl-alcohol, and xylic-alcohol, belonging to a series which includes most of the aromatic oils. They have all been pretty well proven to be alcohols, and they are not acids by any definition of this word. Of late, however, it has been disputed by Kékulé and others that these substances are alcohols, and this opinion would seem to be gaining ground. Of these three tar-alcohols, the phenyl is crystallizable, and has the lowest boiling point. As these became an object of commercial manufacture, the matter was taken up by a Fellow of the Royal Society, a pupil of Laurence, Mr. F. Crace Calvert. Seeing that there was one of the group which required much chemical knowledge and skill to produce it nicely, and knowing that, should he attempt the manufacture of the others, he would be subject to much competition, he turned all his attention to the production of the most difficult, the crystallized phenyl-alcohol, without knowing that it was the least effective of the three. He had no competition. Up to the time of the investigation of the cattle-plague, the other tar-alcohols were supposed not to be antiseptic at all. When Mr. Crookes, and Dr. Smith, and others, took the matter in hand, they had no desire to damage Mr. Calvert's commercial prospects; but were finally compelled to admit that the phenyl-alcohol had no exclusive virtues. In his first report, Mr. Crookes says that the cresyl-alcohol has been supposed to have no antiseptic properties whatever, but that it seems to be nearly if not quite equal to the crystallized preparation. This remark led me to look into the subject; and some experiments convinced me that the cresyl-alcohol is far more efficient than the phenyl. Mr. Parkes says that the impure acid, that is, the whole group together, is better for all purposes to which he has applied it, than are the crystals. Indeed, the whole group as found combined in the old-fashioned creasote, the ordinary creasote of the market, is the thing after all. Its efficiency has never been excelled by any of the separated "acids," and the result of their separation is merely to enhance the cost. As I before remarked, this whole matter of the antiseptic treatment of wounds has been too much complicated. Simple watery solutions would probably produce quite as good an effect as these putties, plasters, lac, etc. With regard to burns, I can claim to speak from experience. A watery solution of creasote, of the strength of about one-half of one per cent., or the creasote-water of the pharmacopœia diluted about one-half, applied on a single thickness of old pocket-handkerchief, will allay the pain of a burn sooner than any thing else. Thus diluted it is a most valuable local anæsthetic. Under this dressing, a burn of the first degree will usually heal without suppuration. One of the second or the third degree will not; nor will it under Mr. Lister's applications. The septic-germ theory of Pasteur, though now commonly accepted in a general way, cannot be made responsible for all the evils of suppuration without grave mistake.

Dr. Jacobi wished to inquire of Dr. Squibb what was the chemical or physical effect of the creasote, undiluted or in strong solution, on healthy tissue?

Dr. Squibb: Its prominent characteristic is to coagulate albumen. A strong solution applied to the surface turns the epithelium white, by virtue of this property. The whiteness disappears after a time, and the epithelium becomes again transparent. But this transparency indicates no return to its normal condition. The albumen once coagulated, it is dead, and must peel off. Another curious effect is noticeable: if too strong a solution is applied to a burn, it does not appear to relieve the pain; I have repeatedly seen a one or two per cent. solution fail to give relief. The character of the pain produced by a strong solution is exactly like that of a burn; but in the behavior of the two there is this difference: If the part rendered painful by such an application be held up so as to drain it of blood, the pain is increased till it may become almost insupportable; if held down so as to allow the influx of blood, the pain is diminished; herein the pain is like that from chloroform, and is exactly opposed to that from a burn.

I might add that the reason why anatomical specimens are so often rendered opaque and unfit for microscopic examination, by being preserved in carbolic acid, is doubtless the too great strength of the solution employed. I suppose an aqueous solution of one-fourth of one per cent. of the cheap impure acid ought not to injure a delicate specimen. I have now in progress a series of experiments to determine this point, using solutions varying from one-tenth of one to one per cent., which last, I am convinced, is quite too strong. The best test of the proper strength of your solution is its application to the tongue. If it coagulates the albumen, producing an effect like that of hot tea or coffee, it is too strong.

Dr. Jacobi: I am glad to see, Mr. President, that the chemist agrees perfectly with what many of us have repeatedly seen. I have made the same observation with regard to the pain, and the effect of position upon it. I have felt, too, that, if the antiseptic treatment is to be of any use, it must be simpler than Mr. Lister has made it, for by his plan each patient requires five or ten times as much attendance as usual. I have myself used carbolic acid in a great number of instances, both upon living and upon dead tissue. A solution of one-tenth applied to croupous membrane will cause it to shrivel up in a very short time; and the very beneficial effect of the acid upon diphtheritic membranes is due to its coagulating power. But this very property leads me to think that solutions of one-fifth to one-twentieth applied to wounds, etc., as in Mr. Lister's practice, will have an effect just the reverse of what he intends. He wishes to preserve healthy tissue; I think I have often destroyed it by using a solution too strong. I know that a number of years ago, when I knew less about the subject than I do now, I very speedily destroyed the cornea in a case of diphtheritic conjunctivitis. I applied a very thin layer of a dilution of one part to eight or ten of glycerine and water to the conjunctiva; the cornea thus became slightly touched by it, and the result was that it was perforated much earlier than in the normal course of the disease. The diphtheritic affection might have caused perforation in thirty-six hours, while I had done it in five or six. I have seen the shrinking and destruction of healthy tissue immediately follow the use of strong solutions; and I agree with Dr. Squibb, that we have not yet reached the minimum of strength desirable. I now commonly employ a dilution of three or four grains to the ounce. I have used it to wash out the uterus in puerperal endometritis; and I am confident that in many cases of this kind, which have lately come under my hands, the patients have owed their lives to this treatment. In very bad cases, I have used intra-uterine injections of twenty grains to the ounce; but then I am careful to use very little of the injection, to throw it directly into the uterus, and immediately to wash out the vagina with a milder solution, to avoid the unpleasant effect which the stronger one would produce upon it. In cases of common catarrh of the external ear, which are often as obstinate as they are uncomfortable, I have employed a three or four-grain solution, and found them yield more speedily than to any thing else.

Dr. Chadsey had made use of carbolic acid from its first introduction, always in weak solutions, never stronger than one part to forty. A severe burn of the second degree had healed without suppuration under a dressing of the acid covered with oiled silk. He had gained happy results in gunshot wounds, putrid sores, disease of the ear, leucorrhœa, and gonorrhœa. For the latter cases, glycerine rather than oil should be used as a solvent, to avoid staining the linen.

Dr. Smith wished to know whether tissue, whose albumen had been coagulated by any means whatever, could possibly retain its vitality; and if not, how such devitalized tissue was gotten rid of in wounds subjected to Lister's treatment?

Dr. Weisse thought it was carried away by absorption, and that the results proved this.

Dr. Jacobi doubted whether albumen so coagulated would find any solvent in the fluids of the wound; and if not, then its absorption was impossible, for absorption could take place only after solution or fatty degeneration.

Dr. Griscom had given inhalations of carbolic-acid vapor in a case of abscess of the lung, with a happy effect.

Dr. Weisse, referring to the statement that Mr. Lister had come down from the use of the pure alcohol to that of a two-per-cent. solution, said that he would doubtless come lower yet, only he wished to feel his way carefully, without incurring in any case what he would deem a risk to the patient. Mr. Lister by no means claimed that all suppuration was due to septic germs. He simply said that experience had taught him that you will limit suppuration in a wound if you prevent decomposition of its fluids.

Dr. Stein had made considerable use of the agent. He preferred tin-foil to protect the dressings, as it could be most nicely adapted to the surface. He had assisted in the removal of nearly the entire frontal bone, for necrosis supposed to be syphilitic, the soft parts having previously sloughed. The suppuration, which was excessive, was checked under the application of carbolic acid, and the wound healed very well. Iodide of potassium was freely given.

Dr. Chamberlain, attempting on one occasion to use what he believed to be the impure acid, had found it quite unmanageable, of about the thickness and color of dark molasses, nearly insoluble in water, and indelibly staining the vessel. He wished to know if he had obtained the right article.

Dr. Squibb: "That, sir, is not the 'impure' but the 'crude' carbolic acid. Nothing should ever be used for medical or surgical purposes which is not transparent, though it may be dark. The impure acid is made by redistilling the crude; it is a combination of the three alcohols, and would much better be called creasote, for it is identical with the old-fashioned coal-tar creasote. A mistake often made is that of prescribing a solution, and getting this; and fearful accidents have occurred from its application pure to burns, etc. The safest mode is to dispense the crystals by measure. The impure acid is never wholly soluble in water, but it should leave merely a slight scum. The tar and oils are rendered more soluble by the addition of alkalies, an occasional adulteration."

"Having answered Dr. Chamberlain, I would say that Mr. Lister began at the wrong end, with the heroic style of treatment. I think it a very interesting question—what did become of the coagulated albumen sealed up by him in his early operations; for he used a large amount of the acid, dipped his finger into it, and smeared it all around inside the wound. If we could suppose pepsine to be introduced there, and a process of digestion to be set up, one might look for absorption. I think it most probable that the coagulated material, in such cases, becomes encysted, like other foreign bodies, for it is, to all intents, a foreign body. Mr. Lister's system illustrates what seems to be a strong tendency in human nature—to seek complication. I am constantly finding persons leave the simple solution I have recommended for burns, and go to ointments, etc., which are not only useless but hurtful."

The President: "I may say that, two years ago last October, I commenced to direct that the wood-work of all the lying-in wards of Bellevue Hospital should be daily dampened with a solution of the crystals, two grains to the ounce. I afterward replaced this by a cheaper preparation of about the same strength. We have since seen a great diminution in the mortality there; but I would not ascribe this to carbolic acid alone, for we are very careful in our hygiene. In addition, I always direct that every woman in the lying-in ward shall have her vagina thoroughly disinfected. I make it the duty of the interne to see that no woman has any smell of the lochia about her; and for that purpose we have used carbolic acid, Labarraque's solution, and the permanganate of potassa. The last I have now discarded, because the specimens furnished were found irritating, perhaps from some admixture of caustic potash. I am not prepared to say that the carbolic acid is preferable to the Labarraque. Moreover, whenever a woman's vagina is found difficult to disinfect—and we meet with such cases now and then—it is made the nurse's duty to have a large piece of rag, saturated in a solution of the acid, laid near the vagina. We do not rely upon these means alone; when the floors are washed, a bottle of Labarraque's solution is added to the bucket of water; pans of chloride of lime are placed in the wards, and also shallow dishes of carbolic acid; the windows are kept open day and night, and the doors nearly all the time. It is certain that, by one or all of these means, we are getting clear of puerperal fever in that hospital.

"As to the manner in which carbolic acid checks suppuration, it at this moment occurs to me, as a matter worth investigating, whether it may not possibly so affect the capillaries of the part to which it is applied, as to prevent the lymph globules from escaping."

The Society then adjourned.

To remove the bitterness of sulphate of magnesia, which is the chief objection to the use of this saline, it is is only necessary, says the *Bulletin de Thérapeutique*, to boil a little coffee in the solution, or add the salt to an infusion of coffee. The disagreeable flavor of a decoction of senna may be masked in the same way.

Bibliographical and Literary Notes.

ART. I.—*The Structural Lesions of the Skin, their Pathology and Treatment.* Illustrated. By HOWARD F. DAMON, A. M., M. D. Philadelphia: J. B. Lippincott & Co. 1869.

DR. DAMON is already known to the profession, and has made his votive offerings to Dermatology in his first-fruits, "Photographs of Skin Diseases" and "The Neuroses of the Skin."

The preface of the present volume informs us that it is a forerunner of other works, yet to appear, on the other classes of skin diseases, and we can express no hope more favorable for what is yet to come, than that it may attain to the excellence of what is now before us.

The classification adopted by the author, for the affections which appear in the present volume, is simple, but most rational; comprising all the numerous structural lesions, which can be arranged under the three grand heads of Hypertrophy, Atrophy, and Pathological new Formations; and the clearness and precision with which all the important points are laid down, the nicety of the anatomico-pathological arrangement, together with the extent of bibliographical reference, while they mark the author as an honest and persevering laborer in the field he has chosen, commend the volume equally to the student and to the practitioner.

There is nothing new under the sun, and perhaps the present work partakes more of the nature of a well-judged compilation than of a contribution to science composed of theories based upon personal observation alone. Its value, however, is on that account only enhanced, and the richness of its references to the best recognized foreign and domestic talent greatly increases its value. No one can give it a careful perusal without the consciousness of having spent his time to advantage.

The exhaustiveness of the subject is the feature which first strikes the reader.

Under Hypertrophies come all the numerous overgrowths of the epidermal structures, including hair and nails, of pigment, of sudoriferous glands, of sebaceous glands, with all the nævi, vascular and otherwise, including dermoid cysts and pendulous growths. The table of M. Vernois, translated from the French, is peculiarly interesting, in setting forth the callosities and hypertrophies formed upon the different parts of the body, as caused by the various occupations.

In regard to diseases characterized by changes in pigmentation, the author takes the ground, that the deposition of pigment in the skin, under certain physiological and morbid conditions of the economy, depends upon the influence of the ganglionic nervous system, and especially upon those portions which constitute the semi-lunar ganglia and the solar plexus. He adduces as examples the pigmentation around the nipple in pregnancy, around the genitals at puberty, etc., and, as an instance of the same system producing changes in pigmentation, he cites the well-known historical cases where a few hours' time has changed the hair gray. The author assumes, from this change in color in the hair, that the pigment has disappeared, making no allusion to the recent investigations on the subject by Dr. Landois, of Greifswalde (Virchow's Archiv, 1866), and Erasmus Wilson, (Lancet, 1867), by whom it is shown that the pigment in no way disappears in these cases, but that the loss of color is due to the fact that the hair becomes permeated by very minute globules of air.

In regard to Addison's disease, the author reviews the tables of Jaccoud, and concludes, from his statistics of 202 cases, that the cancer and tubercle, so often found within and out of the supra-renal capsules in this disease, are only secondary products "from deficient innervation of the tissues consequent on ganglionic disease," that the solar plexus is the part most frequently disturbed, and that the effects of this disturbance are most sensibly felt by those organs, over which its immediate influence extends—the supra-renal capsule, being in close connection with the semilunar ganglion, very naturally suffering first. The liver, lungs, kidneys, and skin, are associated together by the ganglionic system; "the phenomena of cutaneous absorption and excretion, and the production of color, are likewise under the control of these centres of organic life;" consequently he infers that changes in these nervous centres of any kind would necessarily produce trouble in some of these organs, and that the whole train of symptoms peculiar to Addison's disease may be produced by, and a more satisfactory explanation afforded in, disease of the ganglionic system, than in degeneration of the supra-renal capsules. The author does not wholly deny the agency of such lesions, since he allows that they might produce a reflex irritation upon the nervous centres, but that they are not necessarily causal seems to be proved by authentic cases of the disease which have been reported, where no appreciable lesion of the capsules existed. The immediate cause of bronzing, then, lies in the sympathetic system, and not in the capsules. The author further remarks, that the presence of the healthy supra-renal capsules in the albino and in the negro must throw some confusion upon the necessary physiological connection between these organs and the chromatogenous functions of the skin. The conclusion is that Addison's disease should be ranked with Grave's disease, as a neurosis of the sympathetic system, and that the diseased supra-renal capsule is no more the essence of the malady in the one than is the hypertrophied thyroid in the other; both conditions being symptomatic and existing in greater or less intensity.

The article on atrophy includes the description of that condition in all the structures already treated of under Hypertrophy.

The pathological new formations include lupus, keloid, elephantiasis, sclerema, morphœa, lipoma, epithelioma, melanoma, and calcareous deposits.

Lupus is put down as a fibroma. Too little stress appears to us to have been laid upon the inveterate obstinacy of certain forms, and the sometimes almost ungovernable rapidity of the course of the other. The author throws scrofula entirely out of account in treating of the etiology of the affection, not even so much as once mentioning the word scrofula, or any of its derivatives, as having any possible connection with the disease, and thereby quietly avoiding any discussion on the comparative merits of the ideas so positively adopted on the subject by a very respectable proportion of the French school

Moreover, the following remark appears, that "syphilis is, perhaps, the most frequent *fons et origo* of this as of other hereditary evils," the looseness of which statement makes it perfectly valueless, especially as, in the section on treatment, no suggestion is made as to the means of detecting the syphilitic taint from the objective characters of the lupus, or of counteracting it if it exist. Iodide of potassium is mentioned, but only casually among other tonics. Local treatment is almost wholly relied upon to effect a cure.

"Brief Histories of Human Horns from 1599 to 1869" conclude the author's admirable and successful efforts, leaving the reader, in the midst of his interest, with the disagreeable conviction that he must wait for the "continuation" until "our next."

The illustrations are excellent, and the style of the volume unexceptionable. The elegance of its finish would make it an ornament for any table, and its perusal leads to the conviction that, in this case, it is not the fine feathers alone which make the fine bird.

Every one who has been in London will recollect the old Dreadnought hospital-ship,[1] anchored in the Thames, off Greenwich. Seamen of all nations are received on board and assigned to one of the three decks, according as the disease may happen to be medical, surgical, or syphilitic. The present manual is written solely for the use of masters and mates of vessels at sea. It is the fruit of a large experience, sanctioned by the Board of Trade, and is the best manual on the subject in the English language.

M. Adolphus Bachtine, of Nordhausen, has just published eight catalogues, each containing a distinct branch of medicine, and including all the medical books and periodicals which have been printed in Germany for twenty years, ending with 1867. As a contribution to bibliography, and an aid to the physician, it must prove of great value.

---

[1] "The Ship-Captain's Medical Guide, compiled by Harry Leach, Resident Medical Officer, Hospital-Ship Dreadnought." 2d edition. London: Simpkin, Marshall & Co. 1868.

Dr. D. G. Brinton, of Philadelphia, already well known by his literary labors, is preparing a "Guide-book of Florida and the South," for the use of invalids and tourists. Dr. Brinton's long acquaintance with the Floridian Peninsula qualifies him eminently for this work.

J. B. Lippincott & Co., of Philadelphia, announce "The Stomach and its Difficulties," by Sir James Eyre, M. D.

Books and Pamphlets Received.—Address on retiring from the Presidential Chair of the New York Academy of Medicine. By James Anderson, M. D. New York. Pamphlet, pp. 34. Printed by order of the Council of the Academy.

After a brief exposition of the early history of the Academy, and the good which has been accomplished by this organization, Dr. Anderson brings out the great need which exists for a permanent home for the Society. This earnest and stirring appeal ought certainly to be heeded. There can be no doubt of the harmonizing as well as centralizing influence which must follow from bringing the profession more together. The present tendency to segregation, or separation into small bands, is in some respects unwise, though, as regards social communion, it offers many advantages. But the profession cannot be as potent for good, and for the accomplishment of great works, and the elevation of its own standing and the increase of its own influence, as by thorough and comprehensive organization. And this implies a central habitation, which, we trust, will soon be provided.

First Annual Report of the New-York Orthopedic Dispensary. 1869. Pamphlet, pp. 26.

Eleventh Annual Report of the Chicago Charitable Eye and Ear Infirmary. Chicago, Ill., 1869. Pamphlet, pp. 8.

Annual Report of the Directors of the Mount Sinai Hospital. New York. Pamphlet, pp. 52.

Fifteenth Annual Report of the New-York Infirmary for Women and Children. Pamphlet, pp. 14.

Annual Report of the Commissioner of Agriculture for the Year 1868. Washington: Government Printing-Office. 1868. Pamphlet, pp. 18. (From Dr. J. M. Toner.)

This report of Commissioner Capron touches upon two points that directly interest and concern the medical profession. The first is the recommendation to establish a veterinary department, for the investigation and prevention of diseases of domestic animals, and for the advancement and diffusion of veterinary science, and its most efficient and beneficent practical operation. The great good which has been accomplished in this way in European states, and the appalling pecuniary losses from diseases among farm animals—estimated at not less than fifty millions of dollars annually in the United States—are the two powerful arguments in support of this proposition. The other point to which we allude is the recommendation that an appropriation be made by Congress for the establishment of a cinchona plantation, under the care of the Department of Agriculture, for the introduction and propagation of the cinchona-tree. Within a few years past a necessity for some such action as this has become apparent, on account of the threatened extinction of the cinchona forests of South America, by the neglect of the governments there to protect them. Already several of the European governments have initiated measures to avert this calamity, for the supply of quinine may now be considered one of the necessities of existence. The success of the artificial propagation of this tree in Jamaica has several times been alluded to in our pages.

Vegetable Assimilation. A paper read before the New-York Academy of Medicine, December 3, 1868. By Gouverneur M. Smith, M. D. Pamphlet, pp. 8. (From the Author.)

Notes on the Alcohols from Coal-Tar (the so-called Carbolic Acid) and on Rhubarb. By E. R. Squibb, M. D. Pamphlet Reprint from the Transactions of the American Pharmaceutical Association for 1868. (From the Author.)

It is refreshing in times like these, when a common, and perhaps fashionable, impulse seems to pervade the profession for attributing to the so-called carbolic acid all the virtues to be found in the whole pharmacopœia, to come down to purely scientific appreciation of what this substance is, as well as a careful estimate of value in a practical point of view. This our readers will find in Dr. Squibb's little paper, which is well calculated to promote accurate knowledge concerning this interesting and valuable agent. The note on rhubarb is intended more especially for pharmacists, but is equally important, perhaps, for physicians, who, of course, are interested in securing drugs of proper purity.

Joined Twins: The Obstetrical and Surgical Management, with Remarks. By A. B. Cook, M. D. Pamphlet Reprint from the Richmond and Louisville Medical Journal, January, 1869. (From the Author.)

This elaborate paper is based upon a most careful dissection of two children joined by a connecting band four inches in its vertical measurement, and varying from one-quarter of an inch to one inch in thickness. This band extended from the xiphoid cartilages down to the ordinary situation of the umbilicus. There was a common umbilical cord entering at the lower and central portion of the connecting band. The cord was composed of a single vein and four arteries. The twins were still-born, at full term, and weighed together thirteen pounds. The similarity of external conformation in this case to the celebrated Siamese Twins will be noted, and the author takes occasion to discuss the advisability of separation in such cases. Our space does not allow more than this brief notice of the paper, which we consider a most valuable contribution to the literature of this subject, and one, too, that is well worth study for the practical teachings conveyed as to obstetrical management of similar cases.

Venesection as one of the Means for the Arrest of Unavoidable Hæmorrhage. By C. C. F. GAY, M. D. Pamphlet Reprint from the American Journal of Medical Science, January, 1869. (From the Author.)

Dr. Gay in this paper revives a plan of treatment formerly much in vogue, but happily now, in our estimation, fallen into disuse. He presents, in support of his argument, a single successful case, which, however, he candidly admits cannot be considered a test-case, as it was one of lateral implantation of the placenta. He remarks that there was never a doubt in his mind that the flooding was controlled and arrested by the venesection. To us the history of the case, as recorded by Dr. Gay himself, is equally convincing that the venesection had nothing whatever to do with the arrest of the flow of blood. We must, however, respect the candor of his views, and the evident sincerity of purpose which animates the writer, though we should regret, judging from the light of our own experience, as well as from theoretical reasoning, to see Dr. Gay's recommendation come into practice.

Reports on the Progress of Medicine.

VENEREAL DISEASES.

Prepared by FREDERICK RUSSELL STURGIS, M. D.

GONORRHŒA.

1.—*Starch Injections in Gonorrhœa.* [Lancet, September 21, 1867.]

2.—*Action of Digitalis in Gonorrhœa.* [Ibid., November 9, 1867, quoted from the Bull. de Thérap., August 31, 1867.]

3.—*On Urethritis.* [Med. Times and Gaz., December 7, 1867.]

4.—*Blennorrhagia and Rheumatism.* [Gaz. Méd. de Lyons, July 14, 1867.]

5.—*Gonorrhœal Rheumatism.* [Boston Med. and Surg. Journal, December 19, 1867.]

6.—*On Urethral Discharges.* [L'Union Médicale, December 24, 1867.]

1.—M. Luc, a French military surgeon, suggests the use of a thin paste of finely-powdered starch and hot water, in those cases of gonorrhœa where the discharge is painless, or where the inflammatory stage has passed.

2.—The drug appears to act as an antiphlogistic, and to be adapted to the inflammatory stage of the disease.

5.—The writer of this article, Dr. Greenough, of Boston, Mass., with others, bases his belief, of the connection between gonorrhœa and rheumatism being more than a chronological one, on the following facts:

1. Their coexistence is too frequent to be dependent upon chance only.

2. Those who have once suffered from rheumatism occurring in the course of a gonorrhœa are not exempt from it in subsequent claps; on the contrary, the opposite frequently obtains; and

3. This form and ordinary rheumatism are not identical; it is a disease *sui generis.*

The writer proceeds to discuss the portions of the body most frequently attacked. He considers the joints the most liable, and, of these, the knee-joint.

In regard to the treatment, he proposes, as most essential, perfect rest. Should the pain be severe, two or three leeches may be applied, and, if effusion into the joint be present, the application of iodine in some one of its various forms. At all events, the treatment for ordinary rheumatism, viz., by colchicum, alkalies, etc., is of no value.

The writer finally urges the continuance of the treatment of the urethral discharge, as though no complication existed.

STRICTURES.

1.—*External Urethrotomy without a Director.* [Lancet, September 21, 1867, quoted from the Journal de Médecine de l'Ouest.]

2.—*Treatment of Stricture by the Use of Potassa Fusa.* [Lancet, December 7, 1867. Med. Times and Gazette, July 6, 1867.]

3.—*On the Treatment of Permanent Urethral Stricture.* [Boston Med. and Surg. Journal, September 26, 1867.]

4.—*Stricture of the Urethra and Urinary Fistulæ.* [Ibid., Dec. 19, 1867. Also published in pamphlet form.]

2.—This case, which occurred under the care of Mr. Henry Smith, at King's College Hospital, was one of traumatic stricture of the urethra, of one year's duration, which had resisted all attempts to pass an instrument.

At the time of his entrance into the hospital, no instrument, even the smallest, could be passed into the bladder. This organ was much distended, and the urine came away in drops. Mr. Smith determined to resort to the operation for perineal section, but wished previously to that to destroy, if possible, the front portion of the stricture. This was done by inserting a small piece of potassa fusa in a little cavity made at the end of a No. 6 bougie. As the patient suffered no distress, it was repeated three times, at intervals of seven, nine, and twelve days after the first trial. The patient found he could pass his urine better. The caustic was used twice more, and on the nineteenth day after its first application a No. 2 catheter (Eng.) was passed into the bladder. The size of the sound was increased to No. 5, when the man was discharged, with the advice to have an instrument passed once a week. The patient was under treatment seven weeks.

Three cases are reported by Mr. Le Gros Clark in the Medical Times and Gazette, which were successfully treated by the use of the caustic. The method of procedure was the same as in the case of Mr. Smith.

3.—Dr. Greenough, of Boston, Mass., after considering the etiology and symptoms of the disease, proceeds to discuss the means at our disposal for the relief of stricture. The three methods are, gradual, sudden and forcible dilatation, and incision (internal urethrotomy). Upon the first he does not dwell at any length. The second, by means of Holt's dilator, he considers objectionable for these reasons: first, that it is impossible to pass the instrument through very tight obstructions, and, secondly, that inasmuch as many strictures are confined to one side of the canal and do not implicate its entire circumference, there is danger of rupturing the sound portion of the canal, as being the weaker point, and its consequent cicatrization will only make matters worse than they were before. The third one, internal urethrotomy, by Maisonneuve's instrument, he considers the best, the simplest, easiest of execution, and the one attended with the least pain. After the operation he advises the introduction and retention of a large catheter in the bladder for twenty-four to forty-eight hours, to prevent the possibility of hæmorrhage and to protect the wound from contact with the urine, until it shall be sufficiently glazed over to prevent infiltration. Then he counsels the introduction of bougies, at first daily, gradually decreasing in frequency, until, at the end of the third month, its passage once a week will be sufficient. Even then the occasional passage of the bougie will be necessary for years, perhaps for a lifetime, to obviate the possibility of a return of the disease.

The writer concludes by stating "that gradual dilatation should always be tried, and urethrotomy resorted to only when the stricture will not yield to this method."

Note.—The first of the objections made to the use of Holt's instrument is to a certain extent obviated by the improvement and modification of the dilator by Dr. Bumstead. It consists in having a conducting bougie, which is made to screw on the end of the instrument on the removal of a cap, so that the danger of producing false passages is prevented. This improvement has been fully described in a paper by Dr. B. in the October number of the American Journal of the Medical Sciences for 1868. As regards the second, it is certainly a fine distinction to make, whether the stricture is annular or not, and, as our means of diagnosis in that respect are imperfect, the practical value of the objection is somewhat impaired.

After the use of Maisonneuve's urethrotome, Dr. G. advises that a catheter be retained in the bladder, etc. In the cases upon which Dr. Bumstead has operated, both at the hospital and in private practice, he has never followed this plan, and yet no ill results have ensued from hæmorrhage or from urinary infiltration. Sometimes he passes an instrument immediately after the operation, but his usual custom is to do nothing for two or three days after, when he passes the largest-sized sound the meatus is capable of admitting, and then only every second or third day.—F. R. S.

BUBOES.

1.—*Treatment of Buboes in the London Hospitals.* [Lancet, November 23, 1867.]

2.—*On the "Bubon d'Emblée" as the Primary Indication of Syphilis.* [L'Union Médicale, October 24, 1867.]

1.—Is a *résumé* of the method of treating buboes in the out-patients' departments of Guy's, St. Bartholomew's, St. Mary's, London, and University College Hospitals. It consists in rest and the employment of discutients to obviate inflammatory action; if suppuration is evident, the use of poultices to hasten and favor this process, and, if necessary, the subsequent use of the knife. In most of the hospitals the incision is advised to be made vertically, instead of, as is frequently done, parallel to Poupart's ligament.

2. Unreliable.

SYPHILIS.

1.—*Loss of Memory from Syphilis.* [Lancet, September 7, 1867, quoted from the Medical Journal of Rome.]

2.—*Treatment of Syphilis with large doses of Iodide of Potassium.* [Ibid., December 21, 1867.]

3.—*Does Inherited Syphilis predispose to Tuberculosis and Rickets?* [Med. Times and Gazette, December 14, 1867.]

4.—*Discussion on the Prophylaxis of Syphilis.* [Gaz. Méd. de Lyons, July 7 and 14, 1867.]

6.—*On the Treatment of Syphilis.* [Ibid., July 7, 1867.]

7.—*Syphilitic Pulmonary Phthisis.* [Ibid., September 1, 1867, quoted from the Journal de Méd. de Bordeaux.]

8.—*Treatment of Infantile Syphilis.* [Ibid., from the Presse Méd. Belge.]

9.—*Coexistence of Gonorrhœa, Chancroids, and Syphilis, in the same person.* [Ibid., November 17, 1867.]

10.—*Syphilis of Glass-Blowers.* [Ibid., December 1, 1867.]

11.—*Indurated Chancre occurring twice in the same subject.* [Ibid., December 1, 1867.]

12.—*Intra-uterine Chancre.* [Ibid., December 22, 1867.]

13.—*Syphilitic Diseases of the Air-passages.* [Giornale Itáliano della Malattie veneree e della Malattie della Pelle. June, 1868.]

14.—*Case of Epilepsy, of Syphilitic Origin.* [Ibid., June, 1868.]

15.—*Case of an Indurated Chancre showing itself during the period of Secondary Accidents.* [L'Union Méd., September 28, 1867.]

1.—Dr. Cerasi reports the case of a lady, thirty-eight years of age, who consulted him for flagging intellect and loss of memory. She had been treated by many medical men, but without success. Dr. C., suspecting syphilis, instituted treatment with iodide of potassium and mercurial frictions. The patient recovered at the end of two and a half months.

2.—Mr. Julius Pollock relates a case of secondary syphilis, which was successfully treated by the administration of twenty grains of iodide of potassium, three times daily, ten and fifteen grains having been previously tried without benefit. No symptoms of iodism occurred at any time during the treatment, the duration of which, however, is not given.

3.—In a letter to the Med. Times and Gazette, Mr. Jonathan Hutchinson expresses his belief that inherited syphilis does not predispose to either tuberculosis or rickets; at least, no facts exist which prove it.

6.—In a discussion upon the treatment of syphilis, by the committee appointed by the English military and naval authorities, the following conclusions were arrived at, viz.:

The treatment of the primary ulcer should be the same as for simple wounds, inasmuch as no known method of treatment can prevent general syphilis.

Mercury does not prevent syphilis; it modifies its action, however.

If the attack be mild, it will, if left to itself, disappear.

Mercury cannot be called a specific, in the strict acceptation of the term, inasmuch as it has no direct action upon the poison, only upon the *effects* of the poison. Its use had better be abandoned when rupia and gummata appear .Sarsaparilla, guaiacum, and sassafras, have no antisyphilitic properties.

Mercury is of undoubted value in infantile syphilis. As the disease commits the greatest ravages upon weak, ill-nourished children, the first indication is to insure a good diet, and the cure will be hastened.

8.—M. Roger asks the question, Shall a child, who is the subject of inherited syphilis, be treated with mercury? and answers the question in the negative. He gives the following singular reasons for his opinion. He divides the children into two classes: 1. Those in whom the disease is not apparent for some time after birth, being born in seemingly good health; and 2. Those who are born with the evidences of the disease upon them.

Now, the first of these two classes, he claims, is not sufficiently diseased to require mercurials: tonic and hygienic treatment being all that is needed; the second are too ill to be benefited by mercury, "they are as good as dead." For this class also he recommends tonics, and if the child should not die speedily, then mercurials and baths of corrosive sublimate *might* be used.

In commenting upon this opinion, the editor of the *Méd. Gaz. de Lyons* says: "The author has forgotten a third class of cases, which is one most frequently met with, viz.: where the child, born in apparent good health, presents, at a later period, mucous patches of the genitals and of the buccal cavity. This form of the disease may gradually become of grave importance; but for a long time it is amenable to treatment, and it becomes the strict duty of every physician to institute, in similar cases, an immediate mercurial treatment."

Note.—In the opinion that there is no use in treating children of the second class with mercury, "because they are as good as dead," M. Roger is, to say the least, hasty. These are the cases in which the mineral is oftentimes of benefit, and Cullerier, in his recent work (Précis iconographique des maladies vénériennes), speaks most positively upon this point. At any rate, its administration gives the child the best chance for life, and, such being the case, the physician has no right to withhold its use upon any preconceived theory, however plausible.—F. R. S.

10.—In a previous number of the N. Y. Med. Journal, June, 1868, it was stated that the wives of the glass-blowers, who were the subjects of syphilis, contracted from the tubes, had not at that time become infected. Dr. Dechaux, of Montluçon, gives three cases in which the wives of these men had become infected by their husbands, without knowing the source from whence the virus arose.

11.—M. Gailleton presented the case to the notice of the Société des Sciences Médicales with the following history: On the 10th of April, 1867, the patient came to the Antiquaille Hospital at Lyons, with two chancres, one seated in the balano-preputial fold, the other on the preputial mucous membrane, a little lower down. They both had the external appearance of a chancroid, but were decidedly indurated. There was a ganglionic enlargement in the left groin, indolent and hard. There was none in the right. An inoculation was made upon the thigh, with the pus from the first of these ulcers; the result was positive. He was treated with mercury during his stay in the hospital, which ended on the 23d day of July of the same year. He had no symptoms of syphilis at the time.

On November 14, 1867, he returned with the following history: Eight or ten days after he had left the hospital (July 23), he had connection, and two days afterward he noticed a pimple which had become excoriated, enlarged, and had gradually assumed the following aspect. It occupied the upper portion of the prepuce; its base, which was broad, was seated upon the free border of the prepuce, and stretched toward the crus penis: there was also a swelling upon a level with the base of the glands. From this swelling, a lymphitis, which could be distinctly felt, ran up into the groin. Upon the free border of the prepuce the tumor was eroded and presented a smooth, red, glistening surface, without any suppuration. Bi-inguinal adenitis, more pronounced on the left than on the right side, was noticed.

On the 11th November, 1867, secondary symptoms declared themselves.

In the discussion which followed, M. Laroyenne took the ground that the first two ulcers were not true chancres, inasmuch as, had they been, general symptoms must have followed. Moreover, they were anto-inoculable. MM. Dron, Gailleton, and Diday were of the opinion that the first ulcers were true chancres, and that it was an instance of indurated chancres, without general symptoms. [*Credat Judæus.*]

12.—M. Aubert, in his inaugural thesis, in place of the theory that a woman, married to a man who has had syphilis, but who, during his marriage, shows none of the symptoms of the disease, becomes diseased through the fœtus, which, procreated by syphilitic semen, transmits the disease in consequence of the vascular communication existing between the two, propounds the following theory: When a woman contracts syphilis under similar circumstances, it is not the fœtus, but the husband, who has diseased her, and he does so directly, by means of the spermatic fluid, for the semen coming in contact with the surface of the uterus may give rise to a true chancre, if connection has taken place during a menstrual period, for then this surface with its bleeding vessels offers all the appearance of an open wound.

15.—M. Michaud, interne of the Lourcine Hospital, reports the case.

K——, thirty-two years of age, and married for ten years, has suffered for four years from a uterine discharge, symptomatic of ulceration of the cervix. This year, 1867, toward the end of April, she noticed upon the left labium majus a pimple, somewhat indurated, which was probably an indurated chancre. Upon subsequent inquiry, the patient confessed to having had several consecutive pimples, the number of which had increased progressively until the end of June; at the same time she had had crusts in her hair, and had lost flesh.

On the 29th of June she came to the Lourcine to consult M. Desprès, who discovered numerous mucous patches upon the labia majora and about the margin of the anus, and multiple indolent ganglionic enlargements in both groins. They were cauterized with chloride of zinc; no mercury was given, tonics only.

On the 20th of July the patient returned. The mucous patches had nearly healed, but upon the upper lip was an indurated chancre as large as a small hazel-nut. This appeared in the following manner: Eight or ten days after her first visit to M. Desprès she noticed, on the site of a crack upon her upper lip, the crust of which she had picked off the day before, a little swelling, which slowly increased in size, and the crusts of which were renewed.

On July 27th she came for the third time to the Lourcine. Upon the vulva, the former site of the mucous patches, was seen a white macula upon the mucous membrane of the labia majora. Upon the upper lip the chancre had attained to the size of a franc-piece (a silver quarter-dollar). Annular induration was well marked about the base of a tolerably thick crust which covered the swelling. Sub-maxillary and sub-hyoidean adenitis was present, as was also a mucous patch upon the right tonsil.

On the 22d of August she was admitted into the Lourcine, where she was put upon mercurial treatment. On September 5th, mucous patches reappeared upon the labia majora.

CHANCROIDS.

1.—*Remarks upon Simple and Infecting Chancres.* [L'Union Méd., December 24, 1867.]

2.—*Successful Inoculation of a Cephalic Chancroid.* [Gaz. Méd. de Lyons, June 9, 1867.]

2.—M. Rofeta saw at Palermo a man with a serpiginous chancroid of the face similar to those found upon the groin. To be positive that it was a simple chancre, M. Rofeta inoculated himself in five places upon the left shoulder. At the end of five days these points of inoculation became developed into as many chancroids, the edges of which coalesced to form one. With the pus from this ulcer he inoculated himself on the left arm, with a like result. These experiments were performed on October 9, 1866, or thereabouts, and up to June, 1867, M. Rofeta had been exempt from any manifestations of syphilis.

MISCELLANEOUS.

1.—*Report of the Committee on Venereal Diseases in the Army and Navy.* [Lancet, November 16, 1867.]

2.—*Propositions for Restricting the Spread of Venereal Diseases.* [Gaz. Méd. de Lyons, October 1 and 16, 1867.]

3.—*Discussion on the Prophylaxis of Venereal Diseases.* [L'Union Méd., August 31 and September 3, 1867.]

FORMULÆ.

1.—*Powder for Dressing Condylomata.* [L'Union Méd., December 3, 1867.]

℞ Pulv. alumin. et potassæ,
Pulv. sabinæ, āā. ʒj. S.

To be used in the dressing of indolent condylomata. Of course, constitutional remedies must be still employed.

OBSTETRICS AND DISEASES OF WOMEN.

1.—*Ovariotomy.* By GILMAN KIMBALL, M. D., Lowell, Mass. [Boston Medical and Surgical Journal, September 17, 1868.]

In a paper on this subject, comprising a narrative of four cases, Dr. Kimball calls attention to a novel procedure that he adopted in several of the cases. The objects had in view were: 1. To restrain bleeding from the extensive surface on the anterior wall of the abdomen from which the tumor had been torn. The extent of this adhesion, in the first case in which Dr. K. adopted this plan, embraced an area of twelve inches in diameter. 2. To prevent, if possible, the seemingly inevitable inflammation resulting from so extensively torn tissue, and which, by closing the incision in the usual way, could scarcely fail to prove fatal:

> Both of these purposes were accomplished in a manner both simple and effectual. It consisted in closing up the abdomen in such a manner as to entirely *exclude* that portion of the parietes from which blood was flowing—literally turning it inside out, and then, with the bleeding surfaces wholly everted, bringing the parietal walls together at a point where the peritonæum was in a perfectly sound state.
>
> To do this effectually, it was necessary to resort to what is termed the *quilled suture;* in the present case, however, substituting for quills two cylindrical pieces of wood, ten inches in length and a third of an inch in diameter. These, with the broad everted lips held firmly between them, were held in position by six through-and-through sutures.
>
> To complete the operation, it only remained to bring together the everted lips, carefully adjusting them face to face, and finally securing their free edges with eight or ten superficial stitches. By this simple arrangement, the abdominal cavity was not only made to correspond, as

to capacity, more nearly to its natural condition, but it was also rendered comparatively secure against inflammation and all danger consequent upon future bleeding. In short, the case was made to resemble, to all intents and purposes, one of a perfectly uncomplicated and simple character, and consequently most favorable for recovery.

The result of the cases thus far reported appears to have been very satisfactory, but we question whether the procedure adopted by Dr. K. has or can have any influence in restraining or preventing inflammation. The adventitious tissue, which is formed by the adhesive process, is well known to be very insusceptible to the inflammatory condition; and even in fatal cases is frequently found entirely free from the inflammatory process, while other and healthy tissues immediately adjacent give full evidence of the same. As a temporary expedient in restraining hæmorrhage, the plan presents more ground for approval; but, even here, might not the same object be accomplished by a clamp which should coapt the bleeding surfaces without piercing the abdominal walls?

2.—*Ovarian Tumors Cured without an Operation.* [American Journal of Medical Sciences, July, 1868.]

Professor D. L. Miller, of Chicago, in a report on Obstetrics to the Illinois State Medical Society, narrates three cases of the subsidence of ovarian tumors under prolonged treatment. Compare with these the cases reported in the May, 1868, number of this Journal:

The first occurred under the care of Dr. Dodge, in a woman, aged thirty-two years, twelve years married, mother of two children, youngest four years old, miscarried once between the two births. Menstruation regular in time, but profuse. On examination, a tumor, rising above the pelvis to the right of median line, was detected. In consultation, a considerable enlargement of right ovary diagnosed. Under a treatment consisting in the administration of laxatives and tonics, with, alternately, the iodide and bromide of potassium, the chlorate of potassa, bitter tinctures, nutritious diet, and counter-irritants over seat of tumor. The tumor continued to increase four months, remained stationary for two, when it began to lessen in size, and at the end of about ten months entirely disappeared. The second occurred under the care of Professor Rea. The treatment consisted in counter-irritation over seat of tumor, purgatives, tonics, iodide and bromide of potassium. After the lapse of several months, the tumor began to diminish in size, and finally disappeared, leaving the patient perfectly well. The third case occurred under the care of Professor Miller, in a woman thirty-six years old, the mother of two children; had one miscarriage. Tumor first detected after an attack of peritonitis; it continued to enlarge, and at the end of three years and four months had reached the size of a fœtal head. The patient was treated by laxatives, tonics, and nutritious diet, with counter-irritation over tumor, and as alteratives, iodide and bromide of potassium. General health of patient improved, growth of tumor ceased. In August, 1866, the patient became pregnant. During gestation some degree of pain was felt at the seat of enlargement. The ordinary means were resorted to, to prevent inflammation occurring in the enlarged ovary. May 7, 1867, the patient was delivered of twins; one of them was very feeble, and only survived about twelve hours. The other is living and healthy. June 2, 1867, a careful examination failed to detect any appreciable enlargement of either ovary. The patient recovered as well as usual from her confinement. Professor M. queries whether the diminution in the size of the tumor was due to the continuous pressure exercised for so many months by the enlarging uterus.

3.—*Case of Tubal Pregnancy.* By A. SAGER, M. D., Prof. of Obstetrics in the University of Michigan. [Detroit Review of Medicine and Pharmacy, August, 1868.]

Mrs. N., twenty-five years of age, married about five years, menstruated somewhat irregularly, and often with much pain and hæmorrhage. She had never been pregnant. Her general appearance was healthy and vigorous. About six weeks previous to her last illness, I had prescribed for her dysmenorrhœa. She was attacked near evening, after a day of somewhat active exercise, with very severe pain in the hypogastrium, and soon followed by faintness. When I saw her, about an hour after the attack, her face, lips, and tongue were pale; the pulse was scarcely perceptible at the wrist; she was very restless, and the surface was bathed with profuse and cool perspiration. The hypogastrium was very tender, and the right inguinal region was unusually full, but not presenting the circumscribed limits of a tumor. To the vaginal touch the uterus seemed slightly enlarged, but no tumor could be distinguished. The diagnosis founded upon these symptoms was internal pelvic hæmorrhage, but whether the result of rupture of a tubal pregnancy, or from the bursting of some vessel of considerable size belonging to the ovarian or utero-tubal plexus, I did not feel prepared to decide. Practically, moreover, it was a matter of little importance, the indications of treatment being the same in either event. By the free exhibition of brandy and laudanum at short intervals, the extreme jactitation, vomiting, and pain were allayed, and full reaction was established in about six hours. The next morning she was tolerably quiet, but complained of great headache and abdominal tenderness; the pulse was 110, soft, and moderately full; the abdomen became more tumid, and the tenderness more extended; the decubitus was dorsal, with the knees drawn up. Presuming, from these symptoms, that, with the reaction, peritonitis had supervened, the brandy was withheld, and morphine, with small doses of calomel and veratrum viride, were pretty freely exhibited. Imagining, however, that the headache was caused by the morphine, the patient failed to take the medicines with the regularity prescribed. The abdomen was diligently steeped with warm water and spirits of turpentine alternately, and the thirst and vomiting allayed with iced lemonade and bits of ice. The symptoms continued without much change for the next forty-eight hours, when a slight tenderness of the gums was perceived. The calomel was then withheld, and, the morphine and veratrum administered in restricted doses. Beef-tea was given as freely as she could be induced to take it, through her entire illness. On the third day, there was a slight increase of the tympanitis, but the symptoms, in other respects, were not materially changed. A large blister was applied over the abdomen, which drew well, and somewhat relieved the tenderness. Early on the morning of the fourth day, I was called to visit her, as she was supposed to be sinking, but, being then engaged with an obstetrical case, another physician was called, but failed to see her. As soon as I could be relieved, I called, and ascertained that she had expired an hour before my arrival. She had risen to micturate, as she persisted in doing, contrary to my most strenuous injunctions, and, lying back on the bed, immediately expired, undoubtedly, I think, from syncope. The *post mortem* was made twenty-four hours after death, in which I was assisted by Dr. Lewitt. On opening the abdomen, the intestines were found but moderately distended with gas, but not a trace of peritonitis was visible in either the abdominal or pelvic cavities. In the latter, however, and in the right inguinal region, a quantity of semi-fluid blood was found, estimated at nearly a quart. Near the middle of the right Fallopian tube, a globular enlargement was seen, about an inch in diameter, containing an ovum of about five or six weeks. On the external lateral border of the tube, a small laceration was observed, about three or four lines long. The ovum, which was covered with a distinctly villous chorion, was surrounded with infiltrated blood, and in appearance much resembled an early aborted ovum. Both of the Fallopian tubes were considerably enlarged and congested, as at the catamenial period, but had not contracted adhesions to contiguous parts. A layer of coagulated blood invested the tumor, and closed the rent in the tissues. The uterus was but little enlarged, and a distinct corpus luteum found in the right ovary.

In the pathological history of this case there are several points of interest: first, in regard to duration; for, although, in common with all other cases of tubal pregnancy, with the exception reported by Virchow, and one or two more recently, it terminated fatally, yet this result was delayed much beyond the average period, for, of the forty-eight cases reported by Dr. Hecker in the Monatschrift für Geburtskinde, twenty terminated in twelve hours, fifteen in twenty-four hours, three in thirty-six hours, and two in forty-eight hours, while but six were protracted to from three to eight days, and two even to ten days. The death in this case, moreover, seems to have been accidental rather than necessary, as neither shock, nor peritonitis, nor the abundance of the hæmorrhage, could be assigned as a cause, either true or sufficient. As in this, too, so in a large proportion of Hecker's cases, some marked abnormity of the menstrual function existed sufficient to induce either absolute or relative sterility.

Both Hecker and Virchow agree in ascribing these functional deviations in many cases to torsion or constriction of the tubes produced by a local chronic peritonitis, but in the case before us the tube presented no evidence of external inflammatory action; and, in the absence of positive evidence, we may plausibly surmise the arrest of the ovum in its transit through the tube to have been due to chronic inflammatory thickening of the mucous membrane of that part of the organ, as an extension of the chronic muco-metritis.

4.—*Extra-Uterine Pregnancy.* By Wm. R. King, M. D. [Richmond and Louisville Medical Journal, September, 1868.]

The subject was a healthy mulatto woman, about twenty-five years of age, and mother of three children. The first time I saw her was in the month of February, 1860, when I was called to visit her professionally for some slight attack of sickness. In the course of my investigations, I discovered she was pregnant. She informed me that she had just quickened. I judged from the size of the uterus that she was about five months advanced.

In June following I was called to attend her in labor. I found all the usual preparation for the event, and the patient suffering from all the signs of labor, with pains returning regularly. In attempting to make an examination of the presentation, I could not reach the os tincæ. I made a number of other examinations in the course of her labor, but with the same result. The os could not be found in any part of the pelvic cavity. She continued to have hard labor-pains for several hours, when they commenced growing weaker, and finally subsided entirely in about twenty-four hours from the time she was taken, leaving the whole abdomen extremely tender to the touch, with considerable fever. Under the use of active depletory measures and large emollient poultices, these symptoms gradually subsided, the abdomen remaining the same size.

She had no discharge from the vagina during the symptoms of labor, nor subsequently, until the catamenial flow was reëstablished, which followed in the usual time after still-births. It is proper here to state that there was an entire absence of this discharge during pregnancy.

While suffering from the symptoms of labor, she said the movements of the fœtus were as strong as they were at any previous pregnancy, which, she also stated, had been the case from the time she quickened to that period. They were distinctly felt by the application of the hand to the abdomen.

There was a gradual shrinking of the abdominal tumor for about two years, when it was reduced to the size of the womb at five and a half months' utero-gestation, and lying mostly on the left side of the abdomen. Her health at this period was as good as usual.

After this period I lost sight of the case until it was recalled to my mind from reading Dr. Houston's case, as before mentioned. While on a visit to a patient in the country, a few days ago, I called to see her. I found her in good health, the tumor remaining the same size it was six years ago, and occupying the left side of the abdomen. She informed me that the uterine enlargement was first discovered just above the left groin. It appeared, she stated, in the form of a tumor, or knot, as she termed it, and gradually increased in size. Quickening was first felt on that side of the pelvis.

5.—*Extra-Uterine Pregnancy; Gastrotomy; Death; Autopsy.* By D. Lloyd Roberts, M. D. [Medical Press and Circular, January 22, 1868.]

The subject of the case was a woman, aged thirty, admitted into St. Mary's Hospital, Manchester. She had not menstruated for eighteen months previous to her admission into the hospital. She stated that she considered herself in the family-way, as she experienced the usual feelings which attend pregnancy, and at the end of what she supposed to be the ninth month of utero-gestation she had all the symptoms of labor. She said that she had frequently felt the child. An examination of the abdomen showed it enlarged; on the right, extending upward beyond the umbilicus and downward toward the iliac fossa, and laterally a little beyond the mesian line, was an irregular ovoid tumor, exceedingly sensitive on pressure or manipulation. On examining the most prominent part of the tumor by palpation, a decided crepitation, produced by the overlapping of the cranial bones of a fœtus, could be distinctly made out. On examination per vaginam, the os uteri appeared a little higher and more to the right than normal; it was small and admitted the uterine sound to the extent of three inches, the os and cervix uteri were normal, the uterus not so mobile. On the right side of the pelvic cavity, a hard resisting tumor could be felt. She had hectic, night sweats, vomiting, inability to take nutriments, and a small, weak, and frequent pulse. A consultation was held; it was decided to be a case of extra-uterine pregnancy, and gastrotomy was determined upon. Chloroform being administered by Mr. Runcorn, House Surgeon to the Hospital, I commenced the operation by making an incision four or five inches in length over the most prominent part of the tumor until the cyst was exposed. This being opened, a fœtus compressed, doubled upon itself, and bathed in several ounces of dark, puriform, offensive matter was found to occupy its cavity. The child—a male—was at once removed. There was no vestige of the placenta. During the opening of the cyst no hæmorrhage occurred, its cavity was carefully sponged, and the external wound united by sutures and plaisters. A pad and roller completed the dressing, and the patient was put to bed. Four hours afterward her pulse was 130, and in the evening 140; an opiate was given at bedtime, and she had some little sleep during the night. In the morning of January 21st she appeared to be sinking, and, notwithstanding the administration of diffusible stimuli and nutriments, she died about twelve A. M.

Post-mortem Examination.—The uterus was somewhat larger than a healthy multiparous organ in the unimpregnated state. The os uteri was in a perfectly healthy condition. The left Fallopian tube and ovary were normal, with the exception of being bound by bands of false membrane to the back of the uterus. The Fallopian tube was nearly throughout impervious. The left ovary was flattened and shrivelled. The walls of the cyst were formed exclusively by the expansion of the right Fallopian tube. The parietes of this cyst, varying in thickness from ¼ to ½ an inch, had contracted firm adhesions, below, to the pelvic fascia, vessels and nerves; externally, to the caput coli, ascending and transverse colon, and to the ilium, two inches above the ileo-cæcal valve. At this part, the sac itself was firmly bound to the ilium. It was also *firmly* bound to the ascending colon. It occupied a transverse position in the pelvis, its length being about eight inches, its breadth seven inches. The interior of the sac was rough, not unlike that of the deciduous lining of the uterus. There existed no mark by which the site of the placenta could be ascertained. There was no communication between the cyst and the cavity of the uterus. A fine probe could be passed into the right Fallopian tube for about an inch; there was no trace of the right ovary.

Of thirty-one recorded cases of gastrotomy for extra-uterine pregnancy which Dr. Roberts has collected, fifteen or nearly fifty per cent. terminated favorably to the mother. In three cases the children were saved. In one instance only, both mother and child were saved, and this case acquires additional interest from the fact that there was spontaneous expulsion of the placenta. These thirty-one cases do not comprise any in which the operation was performed after ulceration externally had been established. In these cases, which are appropriately termed by Mr. Hutchinson, in his paper on *Extra-Uterine Fœtation*, secondary abdominal section, the proportion of recoveries is very much larger, for the operator has only to enlarge a breach previously commenced by Nature; indeed, these cases almost invariably recover, as Dr. Campbell, in his learned monograph on this subject, has shown. Dr. Roberts thinks that a careful consideration of the recorded cases of primary gastrotomy (for extra-uterine pregnancy) points irresistibly to the conclusion that this may fairly rank among the legitimate operations of surgery. In this opinion he is unsupported by most of the authorities whose judgment is generally accepted by obstetricians.

6.—*Vaginismus.* By Professor Scanzoni. [Monatschrift für Geburtskinde and Detroit Review of Medicine and Pharmacy, August, 1868.]

The views presented by Dr. Marion Sims at the session of the London Obstetrical Society, November 6, 1861, on this topic, and again maintained in his "Clinical Notes on Uterine Surgery, etc., London, 1866," in which he regards the disease as an hyperæsthesia of the hymen and the ostium vaginæ, have induced Scanzoni to lay his views and observations on that disease before the public. According to Sims, the irrritability of the external genitals is so excessive that the slightest touch is intolerable, and sexual commerce quite impossible. This irritability, which especially affects the inferior surface of the well-developed hymen, and induces persistent contractions of the sphincters of the vagina and anus, is not accompanied with any morbid sensibility of the canal above the hymen; nor is inflammation of the inferior surface of the hymen generally present; but the margin of the membrane is hard and tense. Sims's treatment consists in the ablation of the hymen, incision of the vaginal orifice, and subsequent dilatation of the same by large glass bougies or dilators. Of thirty-nine cases thus treated, all were cured, and, although in many cases complicated with other causes of sterility, six had conceived. Finally, Sims denied the utility of dilatation simply, without previous removal of the diseased hymen. During the last three years, Scanzoni has seen thirty-four marked cases. The disease has in many of the cases played an important part in producing sterility. He regards the condition as due chiefly to rude efforts at cohabitation, often associated with rigidity and excessive development of the hymen, and narrowness of the ostium vaginæ. Impaired virility is regarded as an unfrequent cause of this condition. Evidences of inflammation, as redness, swelling, and epithelial exfoliation, were always present; but twice was the hymen found entirely uninjured; in eight cases it was either superficially or deeply lacerated. In the remaining twenty-four cases only the carunculæ were present, and these, too, were red, thickened, œdematous, and were partially excoriated; and in fourteen cases more or less intense vaginitis existed. Only when a considerable period of sexual abstinence had elapsed were these indications of traumatic inflammation absent; and Scanzoni suggests that the cases observed by Dr. Sims may have been chiefly of that character.

This serious affection, which but too easily leads to conjugal dissatisfaction and coldness, renders the most scrupulous investigation imperative, coincident diseases of the most varied character being frequently discovered. Scanzoni found that twenty-five of his thirty-four patients were suffering from various functional and organic deviations, which in twenty cases supervened after marriage, viz.: Eleven were suffering from congestive dysmenorrhœa, one from amenorrhœa for three years, thirteen from chronic metritis, four from ante and retroversion, one from perimetritis, seventeen from chronic uterine catarrh, fourteen from vaginal catarrh, one from ante and two from retroflexion, nine from urinal difficulties, one from inflammation of the right Bartholins gland; in fourteen symptoms of anæmia, and in seventeen of hysteria, were present. Notwithstanding the incompleteness of the sexual act, conception was not quite impossible, two of the thirty-four cases having conceived; the remaining thirty-two had lived from one to eleven years in sterile marriage. The sterility was in no way connected with the absence of the sexual appetency, but dependent wholly upon the muscular spasm, which involved all the muscles of the pelvis, and rendered investigation by the touch or speculum, without chloroform, unavailing.

With appropriate treatment, the prognosis is uniformly favorable; but, except when complete sexual abstinence can be assured, a spontaneous cure is not to be anticipated. On the other hand, every repetition of the sexual act is followed by renewed excitement, even when the intervals are protracted to apparently complete subsidence of all the symptoms.

In relation to the treatment, Scanzoni finds himself strongly opposed to the views of Dr. Sims. Of more than 100 cases that have fallen under his observation, in times past, he has been completely successful in the treatment of all to which he was able to give his personal attention, without in a single case having recourse to the knife. The first condition of success is complete sexual abstinence; for the first three or four days, a tepid sitz-bath should be used night and morning; warm local bathing, with aq. Goulardi, or the same applied with lint, several times a day. Defecation must be regulated, and friction from motion carefully avoided. After a few days, the sensibility of the parts will be so much allayed that a solution of arg. nit., x–xx grs. to ℥ j of water, may be applied with a brush. After about eight days' continuance of this treatment, vaginal suppositories of ext. belladonna and cacao-butter may be placed behind the hymen, and in contact with it, daily. These remedies, either alternately or simultaneously, must be continued until every trace of inflammation has disappeared, and the normal sensibility is restored. Generally two or three weeks will be required to attain these objects. Then dilatation must be commenced; but for this purpose sponge-tents are useless. A graduated series of glass conical specula are best adapted to this object. After the first slightly painful attempt, the patient generally will be able to introduce it with facility, and it may be allowed to remain from one-half to one hour. Even when the hymen remains, it will not be necessary to incise it, as dilatation can be effected without recourse to that measure. At first, the dilator may be used every two or three days, then every day or twice a day for two or three hours, gradually increasing the size of the dilator until the object shall have been attained, which in some instances may require an instrument admitting dilatation, as that of Segalas. Sitz-baths, belladonna, and pencilling with nitrate of silver may be required from time to time, and the cure will usually be completed in from six to eight weeks. It will be seen that, although the treatment of Sims is attended with an equally satisfactory result, it is of a much more serious character (a fatal result from hæmorrhage is reported to have occurred) than the treatment adopted by Scanzoni; and, after the operation, the success of the treatment depends generally upon the subsequent dilatation. The time required, moreover, is nearly the same by either process.

7.—*Rupture of the Womb—Recovery.* Reported by S. A. McWilliams, M. D. [Chicago Medical Examiner, October, 1868.]

Dr. David B. Taylor, Milbourne, Lake County, Ill., was called May 27, 1868, about 9 A. M., to attend Mrs. Hinkle, a farmer's wife, living one mile distant, in her eighth confinement, at full term. All her previous labors, except the last, were severe. The lady is of German birth, 40 years old; has given birth twice to twins, and has now five children living.

Upon examination, the doctor found the os uteri about an inch dilated, and the head presenting. The liquor amnii had escaped about three hours previously. The pains continued light, until 2 P. M., when the os was sufficiently dilated to permit the use of instruments. A severe pain occurred about this time, which caused some progress; in five minutes, a similar one, and soon another, which promised to be still stronger, but suddenly began to die away, while the head gradually receded, and flowing commenced.

The doctor, satisfied that a rupture had taken place, turned and delivered the head with instruments, unable to do so otherwise. The child—a male—was dead when born, and weighed 8½ lbs. The placenta was found detached, and delivered at once.

A further examination revealed a rupture to the right of the median line, through which the doctor readily passed his hand, and removed a couple of handfuls of blood, when the womb began to contract rapidly. The woman, being now threatened with syncope, was given three 2-dr. doses of brandy every eight minutes. A Dover's powder being now given, she was allowed to rest 2½ hours. Reaction commenced—pulse 100 per minute. A powder of 3 grs. calomel and ½ gr. opium was ordered to be given every two hours; also 2 dr. nitrate of potash, to be dissolved in half a tumbler of water, of which a dr. was to be given every hour. During the night, tympanitis set in, became very severe, and lasted about three weeks, subsiding gradually with the diarrhœa. A mush poultice was kept on the bowels for the first ten days, when an eruption of vesicles appeared on the abdomen.

May 28th, 8 A. M.—Pulse 125. Continued solution of potash, and ordered 5 gr. calomel and 1 gr. opium every two hours.

8 P. M.—Omitted solution of potash, and gave 10 gtts. fl. ex. gelseminum every four hours for forty-eight.

29th, 8 A. M.—Pulse 140. Gave ten grs. calomel, 1½ grs. opium, every three hours for six days, when bowels were moved with an injection of soap-suds.

June 5th.—Pulse 150. Bowels moved about eight times daily for the ensuing week, then gradually improved, and she vomited occasionally during the next three weeks.

Previous remedies omitted—3 gtts. nitro-muriatic acid given every four hours for thirty-six hours, and ⅛ gr. nitrate of silver in solution every four hours.

6th.—Lochial discharge now occurred for the first time.

After two weeks, a pill of 2 grs. quinia and 1 gr. precipitated carbonate of iron were given every four hours for four or five days, when tympanitis had nearly subsided.

After which, 15 gtts. tr. ferri chlor. and 2 grs. chlorate potass. in syrup were given four times daily.

The diet consisted mainly of crust, coffee-barley and rice water, for the first two weeks; after which she was able to take bland articles of nourishment.

July 28th.—The woman is around, attending to her ordinary household duties.

8.—*Traumatic Aneurism of the Uterine Artery.* [Medical Times and Gazette.]

This unusual case was reported at the December (1867) meeting of the London Obstetrical Society, by Dr. Graily Hewitt. For a discussion on the question of the diagnosis, the reader is referred to the paper by Dr. Rogers, in the last number of the Journal.

The subject was an Irishwoman, a patient of University College Hospital, the mother of several children, aged thirty-seven. She was delivered by means of the forceps, and for the first few days appeared perfectly well. On or about the fourth day after labor, her husband came home drunk, and it is stated that he knelt upon her as she lay in bed. No immediately bad effects followed, but, thirteen days after labor, a slight flooding occurred. Inflammatory action on the right side of the abdomen became evident. Twenty days after labor, a second violent flooding took place, from which she nearly died. Thirty-one days after labor large quantities of yellowish matter escaped per vaginam. On the thirty-fourth day a third violent flooding came on; and on the thirty-seventh day there occurred again a fourth and final violent hæmorrhage, from the effects of which she could not be rallied. The parts exhibited consist of the uterus and neighboring structures. The uterus is large, os patent, a small clot within it. At the junction of the cervix and body are two depressions, one on each side; on the left side there projected into the uterus from the pouch in question a rounded mass half an inch in diameter. By the side of this projecting mass a probe freely passed through the pouch into the interior of a large abscess, which reached from the broad ligament to the kidney. The little mass was hollow, contained a small clot of blood, and was perforated at one part of its surface. It was found, on further dissection, to be an aneurismal dilatation connected directly with the uterine artery, which opened freely into it. The sac itself was composed of layers of fibrin. It is evident that the uterus had been bruised, and probably actually lacerated, by the pressure employed against the projecting pelvic brim behind, the organ being at the time of the injury still of considerable size. The perforation of the uterine wall and the abscess were secondary effects; the aneurismal enlargement showed that the uterine artery had been injured, and the source of the repeated hæmorrhages from the uterus was the enlargement in question. The case appears to be unique.

Dr. Aveling considered that it would have been advisable to dilate the cervix with a sponge-tent, and then explore the uterine cavity with a view both to diagnosis and treatment.

Dr. Routh, understanding from Dr. Hewitt that he had detected the abscess during life, and judging with the advantage of the *post-mortem* examination before him, could not but think that perhaps something more might have been done before death. A sponge-tent applied would have given a freer exit to the pus subsequently, and at any rate checked the hæmorrhage. Moreover, it would have revealed the existence of this pulsatory tumor, which might have justified the injection of tincture of the sesquichloride of iron into the uterine cavity, or a drop or two of the perchloride might have been injected into the tumor itself, or the continuous galvanic current applied, and so the tumor destroyed. After the second hæmorrhage, some interference was justifiable, and the third might not have been fatal. He did not, however, in any way call in question Dr. Hewitt's skill, as the case was very obscure during life.

Dr. Graily Hewitt stated, in reply, that he had not seen the patient during the first part of her illness. Her condition was such that he did not consider dilatation of the os with the view of exploring the interior of the uterus would have been a proper procedure. Looking to the fact that the probability was during life in favor of the existence of rupture of some vessel of the uterus, extreme rest and quiet appeared to afford the patient the best chance of recovery. The condition actually present was of course not suspected, there being no instance of the kind on record.

9.—*Partial Recurrent Inversion of the Uterus.* By M. Calkins, M. D. [Boston Medical and Surgical Journal, October 22, 1868.]

At a meeting of the Springfield (Mass.) Society for Medical Improvement, Dr. Calkins reported the case of a primipara 28 years of age, in whom, after an easy labor of six hours duration, the placenta came away spontaneously. Fifteen minutes subsequently a partial inversion of the uterus was detected—the symptoms being pain in the uterus, nausea, and chilly sensations—pulse very feeble, and rapid appearance of syncope. There was also profuse hæmorrhage. The partial inversion was immediately reduced, and a piece of ice passed up the vagina to the os uteri. Immediate relief was experienced; the hæmorrhage ceased; consciousness returned, and strength improved. This condition of things occurred three times, at intervals of about an hour—the same management being adopted each time. Ergot was administered after the second occurrence of the inversion. The patient for years had suffered "from chronic disease of the uterus, and was inclined to anæmia and deficient tonicity of the muscular system."

10.—*Extirpation of Uterus and both Ovaries.* By James B. Cutter, M. D., of Newark, N. J. [From Report of Proceedings, New York Pathological Society. Medical Record, October 15, 1868.]

Patient, Miss McC., of Harlem, N. Y., aged forty; unmarried. About eight years ago first had her attention attracted to an enlargement of the abdomen, upon the right side, which was uniform in size and distinctly hard to the touch. It gradually increased in volume, excited her alarm, and she consulted a number of physicians, many of whom, at this early stage of its growth, mistook it for ovarian disease, and advised its removal.

About four years ago she consulted Prof. Charles Budd, of this city, who examined the case in connection with Dr. Emil Noeggerath. The opinion given at this time was, that the tumor was distinctly uterine; nothing was done or advised, and the patient soon passed out of the hands of Dr. Budd, and was without treatment for some two years, when she next consulted Dr. Wooster, of Ninth Street, who it seems recognized the difficulty, and she informs me divided the cervix uteri with the object of arresting the growth of the tumor.

She had almost constant hæmorrhage—the quantity of blood lost at times, particularly at the catamenial periods, was enormous; while at other times it had consisted of a passive drain or excessive leucorrhœal discharge, producing such weakness and exhaustion that at times her death was looked for as imminent.

On examination the uterus felt as large as a seventh or eighth month's pregnancy; hard and lobulated to the touch, and filling the cavity of the abdomen somewhat uniformly, slightly inclined, if any, to the left side, freely movable, and well lifted out of the cavity of the pelvis, giving the impression of a long, slim attachment. Per vaginam the organ was felt well up in the pelvis, the os presenting a normal feel, and no evidence remaining of the os having been divided.

Upon introducing the uterine sound, it entered readily into the cavity to the depth of six inches, passing off to the right side of the uterus, and being distinctly felt through the walls of the abdomen at this point, giving the impression that there was a large fibroma springing from the left wall of the uterus and crowding the organ over to the right side.

This was accounted for—as was demonstrated at the time of the operation—by the uterus having made a partial turn, its anterior surface looking toward the right iliac region, consequently bringing the broad ligament of the left side of the uterus directly into the line of incision.

Wishing to have my opinion fully corroborated, Drs. Emmet and Peaslee were requested to see the patient in consultation on the following day, when both confirmed my previous diagnosis.

Very little encouragement, as regards an operation for the removal of the tumor, was given the patient, and she returned to her home, and was not seen or heard from until three months had expired, when she presented herself at my office much in the same condition. She had been seriously ill in the interim, and stated that she thought the tumor had grown considerably, at least an inch and a half in the past six months. She expressed herself as decidedly in favor of an operation, and wished its performance upon the following month. Her condition at this time was as follows: Pulse eighty-five, weak and compressible; insomnia; constipated bowels; scanty urine; appetite capricious; pain through the loins and back, with considerable uterine tenesmus.

The usual preparatory treatment having been pursued, the patient's general condition was as good as could be expected under the circumstances, and on Monday, September 14th, at 1 P. M., the operation was begun. I was kindly assisted by Drs. Lewis A. Sayre, Charles A. Budd, Benjamin Howard, and Robert Newman—the latter gentleman taking charge of the anæsthetic. The anæsthetic (chloroform being relied upon, ether having a bad effect) occasioned considerable vomiting, and much time was consumed in bringing the patient fully under its influence.

An incision was made in the median line of the abdomen, some three inches in extent, the abdominal wall, which was exceedingly thick, carefully divided upon a director; owing to the exceeding thinness of the walls beneath the layer of adipose tissue, the tumor itself was slightly wounded, from which there was an inconsiderable amount of venous blood; this was readily controlled with a sponge and firm pressure, the tumor being well pressed against the walls of the abdomen. No blood was allowed to enter the cavity of the abdomen. A large-sized steel urethral bougie was now passed around the tumor, and no adhesions discovered; the wound was enlarged with the scissors to some distance above the umbilicus, and the tumor rolled from its bed; a stout silk ligature was passed around each broad ligament, and tied firmly. Storer's clamp shield was next applied above the ligature, including the entire pedicle, which was separated close to the tumor by the écraseur. At the suggestion of Dr. Sayre, three ligatures were passed through the stump to keep it elevatad and under control, while the clamp was relaxed, and a stout double ligature passed around the mass below and tied firmly. Not a drop of blood followed the removal of the clamp; the superfluous ligatures were now removed, the principal ligatures about the pedicle brought out of the lower corner of the wound, which was closed by eighteen interrupted silver sutures; there was no sponging out of the cavity of the abdomen, as I stated before, Dr. Sayre having carefully kept the tumor well pressed against the walls of the abdomen.

The time occupied in removing the tumor was at least two hours, and frequently the pulse flagged and stimulants had to be pretty freely administered.

Very little blood was lost during the operation, certainly not more than two ounces, and this was pure venous hæmorrhage, and came from the tumor alone.

Treatment and Result.—For forty-eight hours every thing went on as promisingly as could be possibly wished for, under the most favorable circumstances, and I looked for a favorable result. Nausea was persistent, and was relieved by ice taken in small quantities for the first twenty-four hours; morphine was introduced subcutaneously to the extent of four grains in all; enough was given to simply control pain and uneasiness. She rested well the first night, and upon the following slept three full hours in succession, and frequently a half hour at a time. The pulse did not exceed 100 until the beginning of the third day, when all the symptoms changed for the worse, pulse getting weak and rapid, reaching as high as 130 per minute; before this rapid acceleration, the pulse was but 96, and of good volume. Vomiting came on soon after the beginning of the third day, and she ejected from the stomach a dark-green and bitter offensive fluid. It soon became lighter in character, and sweetish to the taste, and continued until death. Vomiting could not be controlled or relieved by champagne, ice, or any of the usual remedies. Strong juice of beef was injected into the rectum, quinia subcutaneously, all of which seemed to have not the least beneficial effect, and she died of sheer exhaustion, having survived the operation seventy-five hours.

The temperature of the body did not exceed at any time 101°; the urine was abundantly secreted; there was but little tympanites, and no pain to speak of upon pressure over the abdomen; the mind was clear and active throughout, and at no time was there complete narcotism.

Sectio cadaveris twenty hours after death. Rigor mortis well marked; a slight uniform distention of the abdomen. Upon removing the eighteen sutures a considerable amount of force was found necessary to break up the adhesion which had taken place throughout the whole extent of the incision.

The intestines were distended with flatus, and that portion in contact with the ligature was covered with a slight plastic effusion. A careful examination could detect *no clots* within the peritoneal cavity; no evidence of peritonitis; liver somewhat friable, but otherwise healthy; in the gall-bladder, however, were found three large concretions, each with a well-marked facet; lungs and heart normal.

The Pedicle.—The stump of the pedicle was found to have been well guarded against hæmorrhage; it was found that the tumor was cut off just above the cervix, and that the ligature had partially cut through the neck of the uterus, allowing a probe to readily pass into the cavity of the abdomen, establishing a means of egress for any discharge, which would have answered full as well as an opening made through Douglas's cul-de-sac.

11.—*Discharge of a Fœtus through the Rectum.* [Idem.]

Dr. Koehler exhibited the skeleton of a fœtus that had been passed per rectum. A lady, twenty-four years of age, became pregnant for the second time. The first three months of the pregnancy were passed under continual hypogastric pains. Then, suddenly, a pint of coagulated blood escaped through the vagina, whereupon the pains decreased and discontinued. She went to a physician well known to me, for advice. When he tried to introduce the uterine sound into the orifice, he was unable to succeed. The cervical portion of the uterus was scarcely accessible. The patient consulted several other physicians, who advised her to await events. Normal movements of the fœtus from the end of the fourth month to the end of the pregnancy were ascertained. The prolimina of the birth appeared at the right time. The pains, however, had no effect; they lasted for three weeks, decreased by-and-by, and finally subsided. Then the secretion of milk took place. The patient became emaciated and cachectic. Two months after the end of the normal duration of pregnancy, a rectitis and an abscess in the anterior wall of the rectum made their appearance, and a quantity of decomposed pus and ichor soon escaped through the rectum. Hairs of a fœtus were detected in the discharged matter. The skeleton of the fœtus then escaped through the rectum within the period of three days. The bones of the cranium following the other bones were removed by means of a polypus-forceps, either entire or broken. The aperture of the abscess was located one and a half inches above the anus. The diameter of the opening, when relaxed, measured one inch. One month after the evacuation and removal of the bones, perfect convalescence and menstruation took place.

The enlargement of the abdomen during the whole period of the pregnancy was uniform, not lateral, and the cervix uteri, even at the end of that period, was for a closer examination inaccessible. The patient was not confined to bed.

12.—*Rupture of the Uterus and Vagina.* By EDWARD BARTON, M. D., Orange, Mass. [Boston Medical and Surgical Journal, July 30, 1868.]

I was called, April 7th, 7 o'clock, A. M., to Mrs. ——, Irish, aged 40, mother of three children, one stillborn. She was of medium size, rather fleshy, of uniform good health. I learned that she was attacked with labor-pains about 5 P. M., the day before; that the full time for labor had arrived; that labor progressed apparently favorably till 10½ o'clock, when she had a very severe pain, accompanied with a tearing sensation low down in the left side, and an audible snap, which was heard in an adjoining room; the pains ceased from that time; severe hæmorrhage and free vomiting ensued, and she became cold and languid. I found her with pale and sunken countenance, cold extremities, and feeble pulse, and occasionally eructating dark-colored matter from the stomach, which she frequently had done during the night.

Under these circumstances, I made a vaginal examination, but finding such a confused state of things that I could not ascertain any thing satisfactorily by the feel of the finger, I carried the hand within the vagina and discovered a laceration, and an entire separation of the vagina from the uterus, with two longitudinal rents in the upper third of the vagina—one anterior, the other posterior—and both a little to the left of the median line; these rents extending into the left portion of the cervix uteri, and there meeting. This triangular-formed flap was turned down and pendulous within the vagina, some three inches. The uterus was high up, its cervix resting to the right of the sacro-vertebral prominence, with its fundus turned to the right, and apparently empty and firmly contracted. The fœtus was not within reach while the hand was within the pelvis, but it could be felt through the abdominal parietes, above the umbilicus.

I could not satisfy myself whether the membranes had been ruptured before the accident, but the patient was sure that there had been no sudden gush of water.

She was stimulated, had warmth applied to the extremities, and an opiate administered; after the lapse of several hours, the patient not getting materially worse, I decided to make an attempt to deliver. She was etherized; the hand, moistened with warm water, was carried through the rent to the left of the uterus, its fundus grasped within the hand, and found empty and firmly contracted. The hand passed up, with its dorsum to the parietes, above the umbilicus, and rested upon the breech of the fœtus, which lay transversely, with its head and shoulders in the left iliac region; but the omentum intervened, and the hand was drawn down and passed beneath the omentum, the breech gained, and then by degrees the right foot. Failing to secure the left, the right was drawn down and secured, and then the left found and brought down also; traction was commenced, and after some difficulty the patient was delivered of a large female child, and then of the placenta, with the cord entire. The hand was again passed within the vaginia; there was no protrusion of the viscera through the rent, and the lacerated parts were adjusted as well as circumstances would admit.

At this stage of proceeding, the patient was very low, the pulse being hardly perceptible. As soon as she could be made to swallow, stimulants were freely given, warm applications to the extremities, and warm spirit lotion to the abdomen. At the end of an hour reaction had slightly taken place, and at the expiration of five hours she appeared about as well as before I commenced delivery.

The history of the progress of the case is given at length by Dr. B., but presents nothing of very special import.

At 4 o'clock, A. M., on May 5th, she had a chill, with pain in her bowels, her extremities became cold, and she died in one hour, having lived twenty-eight days and six hours after the accident. No autopsy.

No vaginal examination was made after the day of delivery.

In treating the case, the object from the commencement was to keep her constantly under the influence of opiates, not to the extent of narcotism, but so that its effects could be felt by the patient and seen by others. The patient was not well nursed.

13.—*Rupture of the Uterus; Gastrotomy: Recovery.* By E. Miles Willett, M. D., Memphis, Tenn. [Humboldt Med. Archives, October, 1868.]

In the summer of 1859, Mrs. V., aged twenty-one, a native of Italy, was delivered with forceps, at full term, by Dr. Frayser and myself. The child was born dead, owing to the tedious labor and prolapse of the umbilical cord. In 1860 she was again delivered with forceps of a lifeless child. The following year, she returned to Italy, and was confined near Genoa. When the waters broke, an arm came down, the accoucheur turned and delivered, but the child perished. After each labor, the convalescence was speedy, and without a single bad symptom,

On Sunday night, March 20, 1865, she was again seized with labor, but, as the pains were inconsiderable, the physician was not disturbed until four o'clock, A. M., when my partner, Dr. Frayser, was summoned to her assistance. After making an examination, he did not deem it necessary to remain, and consequently returned home. At eight o'clock he visited her again, but perceived nothing remarkable in the case—the os uteri was soft and dilated, while the child's head seemed about to engage in the superior strait, but the pains were neither frequent nor hard, and there was but little sympathetic disturbance of the system.

At nine o'clock, Dr. Frayser told me that Mrs. V. was in labor, and, as he anticipated difficulty, very kindly requested me to see the case with him.

We found the patient somewhat restless and disturbed in mind. She had vomited freely, and was throwing up bile when we entered the room, but had not had a labor-pain for half an hour. The blood in the vagina, the recession of the head, the absence of labor-pains, and the irregular surface of the abdomen, through the walls of which could be distinctly felt an elbow, made the diagnosis of rupture of the uterus absolutely certain, although the attendants did not think that she suffered much, and could not remember any particular agonizing pain.

After consultation, we decided to perform gastrotomy. The sudden announcement of the exceedingly dangerous condition of the patient, and the explanation of the proposed formidable operation, produced such an effect on the feelings of her husband and friends as can *only* be imagined. That they should have withheld their consent, for a while, to the performance of an operation, which offered so little prospect of success, is not surprising. In the midst of this delay, the patient herself requested us to do whatever we deemed best. At twelve o'clock, therefore, two hours and a half after the rupture occurred, I commenced the operation, assisted by Drs. Frayser and Grant, by making an incision in the median line, through the skin and cellular tissue, from below the umbilicus to within an inch of the pubes; but as this would not give sufficient room, I extended it upward and to the left of the umbilicus. I then opened the peritonæum, and with a probe-pointed bistoury, guided by my finger as a director, completed the incision. We found that the child and the placenta had been expelled by the uterus into the cavity of the abdomen, the child's head rested on the brim of the pelvis, and the uterus had contracted sufficiently to prevent exhausting hæmorrhage. After removing them, we sponged out the blood and amniotic fluid as well as we could, drew the edges of the wound together with interrupted sutures and adhesive plaster, adjusted the body bandage, and ordered cold applications. During this time, the patient was fully under the influence of chloroform. The pulse was ninety-six, and sufficiently full before the operation; one hour afterward, it increased to one hundred and ten. During the night she took six drachms of elixir of opium.

The daily record of the progress of the case we omit, as it contains nothing of very special interest.

April 3d. Wound entirely united; pulse one hundred and eight; bowels in good conditon; vaginal discharge considerable and very offensive. Ordered diluted chlorinated soda to be alternated with the permanganate of potash, as an injection. From this date, the vaginal discharge gradually diminished, and became less offensive; and, under the influence of iron, wine, and nutritious diet, the patient, in a few weeks, regained her former health, and strength, and beauty.

In due course of time the menstrual function was established, and since then has been regularly performed in a physiological manner. She is now in the enjoyment of excellent health, and has not had occasion to be prescribed for since the operation.

14.—*A case of Tubal Pregnancy cured by Puncture.* By Dr. Edward Martin, of Berlin. Translated by Samuel Brandeis, M. D. [Richmond and Louisville Medical Journal, October, 1868.]

Mrs. L——, 29 years old; well nourished during the first five years of her matrimony, sterile in spite of various water-cures at Ems and Shoalbach, and other treatment. After her first husband died, from phthisis, she married a robust young man, and though her menses returned regularly for the first eighteen months, they were first arrested in January, 1867; nausea and great debility, particularly of the lower extremities, and other appearances, led the young couple to suspect pregnancy, which was so much more confirmed by the missing of the catamenia at the following term in February.

After Mrs. L., on the 25th of February, had exerted herself somewhat too much while arranging some of her furniture, she was, on the 26th, with her husband, riding to a party, and there she was suddenly taken with a violent pain in her abdomen, so that she was compelled to return and go to bed.

Violent nausea and vomiting, tenesmus at stool and micturition, together with tormenting colic, lasted all night. The summoned physician ordered morphia and fomentations upon the abdomen.

On the 27th of February, Dr. Edward Martin was called in and found the patient pale and apparently collapsed; countenance anxious; pulse 120; the abdomen tympanitically distended and painful to the touch; the ostium vaginæ narrow; uterus strongly anteflexed; its fundus enlarged; portio-vaginalis in the hollow of the sacrum, difficult to reach. The gradual application of cold fomentations and an enema of castor-oil gave some relief, but not enough to permit the patient to leave the bed.

After a renewed but less intense attack on the 3d of March, a moderate hæmorrhage took place, at which a piece of decidua was discharged. A small circumscribed tumor could now be felt behind the integuments of the left side, a little above the horizontal branch of the pubic bone. The hæmorrhage did not last long, but returned slightly between the 16th and 18th of March. Under the continued use of mild purgative medicines and application of cold fomentations to the abdomen, the patient continued to be comfortable, until, on the evening of the 10th, a new spell of pain set in, which was repeated on the 14th. The increased tympanitis and tenderness of the abdomen made a careful palpation of the abdomen impossible; but the small, spindle-shaped tumor above the left horizontal branch of the pubis could still be felt near and next to it; toward the right side, another smaller one of globular shape.

The internal examination revealed an essential change, as compared with the former condition. A decided lateroversio uteri was now so manifest as to present the fundus uteri strongly toward the right, while the vaginal portion was situated toward the left side. In the left side of the pelvis, the same spindle-shaped tumor could be felt through the cul-de-sac, which presented itself behind the integuments in the left hypogastrium. The touch of it produced slight pain. The condition just noted in connection with the steady and gradual growth of the spindle-shaped tumor, besides the developed uterine fundus, could only confirm the suspicion of a tubal gravidity, particularly as, two weeks after the menstrual arrest, a piece of decidua was discharged.

The frequent return of intense pain, the profound general disturbance, in connection with the steady increase of the spindle-shaped tumor, gave rise to serious apprehensions as to a probable rupture of the ovum and a consequent internal hæmorrhage. Dr. M. was therefore happy to find the attending surgeon agree with him as to the necessity of preventing the further development of the ovum. For that purpose, on the evening of the same day, after emptying the bladder, Dr. Martin, under the guide of the left index-finger, introduced an explorative trocar, which was curved like the pelvic axis and was sixteen centimetres long, the patient being anæsthetized; while the mentioned spindle-shaped tumor was pressed down into the pelvis by an assistant, with the hand upon the abdomen, the instrument was pushed upward into the left portion of the cul-de-sac containing the tumor, for about from four to five centimetres.

After the stillette was removed, the canula advanced easily about two centimetres farther in, which proved that a cavity was entered.

A discharge of a few drops of sanguinolent serum followed, upon which the canula was removed. The patient roused from the narcosis without making any complaint. The patient was carefully watched; had cold water fomentations upon the abdomen, which acted so soothingly that she always desired them to be repeated.

Within the next eight days, no further growth of the tumor was observed.

On the 4th, 5th, 6th, 7th, and 8th days of April, some severe rigors made their appearance; some meteorismus existed on the 8th, but the tumor was distinctly reduced in size, and the uterus had evidenly returned from its latero-version into the normal axis.

Quin. sulph., gr. 1, was ordered three times a day.

On the 10th of April, after a copious discharge from the bowels, a small quantity of grumous blood and some gelatinous coagula came away from the vagina. The gradual decrease of the tumor became always more distinct. On the 16th the uterus was discovered in the pelvic axis; its fundus could no more be found behind the right horizontal branch of the pubis.

General health advanced gradually, though constipation, connected with colicky pains and a rise in the pulse to 120 in a minute, would, from time to time, disturb it slightly.

On the 4th of May the condition was so good that the patient was permitted to leave the bed.

At the end of June, patient was examined per vaginam; genitals found perfectly normal, and patient permitted to make a trip in the country.

No bones, such as were expelled in the former case, reported by Dr. Martin (vol. xxi., page 245), in which the ovum was lodged in Douglas's fold and punctured through the rectum, came away in this case, as the fœtus was hardly advanced to the third month, nor did the locality favor such an event. The fact of the expulsion of some shreds of decidua, the regular growth of the spindle-shaped tumor distinctly felt behind the left horizontal branch of the pubic bone, the displacement of the uterine fundus to the opposite side, allow no room for any doubt as to the existence of gravidity in the left Fallopian tube.

The result of the operation was just as favorable as in the former case reported by Dr. Martin, and in another case reported by Dr. Greenhalgh in the *Lancet*, March, 1867.

Considering the great danger connected with a rupture of a fecundated Fallopian tube, this operation will certainly be justified, granting that the diagnosis stands established.

15.—*A New Sign in the Diagnosis of Early Pregnancy.* By ROBERT BARNES, M. D.

Prof. Barnes, in a paper read before the British Medical Association, drew attention to a peculiar stretching of the connective tissue which binds the cervix uteri to the base of the bladder, caused by the anteversion of the gravid womb. This stretching backward produced a characteristic smooth elastic plane of the roof and anterior wall of the vagina. This connecting areolar tissue is remarkably distensible, so that the space between the anterior wall of the cervix and the bladder is lengthened. Dr. Barnes thinks that when the peculiar tense, smooth plane of the vaginal roof is found in connection with the violet color of the vagina, first described by Jacquemier, the presumption in favor of pregnancy is very strong.

16.—*Cystic Disease of the Kidney simulating Ovarian Disease.* [Medical Times and Gazette.]

At a recent meeting of the Royal Medical and Chirurgical Society, Dr. Henry C. Rose narrated the following interesting history:

C. R., a rather delicately-constituted young lady, discovered a tumor about the size of an orange in the situation of the left ovary when at the age of thirteen. About this period she menstruated for the first time, and continued to do so at intervals of three or four months for some years. She suffered also from hæmaturia occasionally, but in the early stages never mentioned the fact. She came under the author's care in January, 1856. The tumor at that time appeared solid, no fluctuation being perceptible. The tumor gradually increased until July 22, 1865, when it extended from the pubes and Poupart's ligament on the left side to the ribs, and reached beyond the median line of the abdomen considerably. Fluctuation was now very perceptible; and, equidistant between the crest of ilium, umbilicus, and ribs, a prominent point presented itself, over which the skin was thin, livid, and very tense. Through this point Dr. Rose introduced a trocar, and evacuated seven pints of sanguineous clotty fluid. A large mass was still felt in the abdomen, apparently partly solid and partly multilocular. She remained very faint and low for some time, but in the course of about two years she had so far recovered as to be able to walk two or three miles, or play croquet for three or four hours at a time. The fistulous opening made by the trocar remained patent during the remainder of her life, giving vent to semipurulent fetid fluid, varying in quantity from one ounce to several ounces daily. No hæmaturia or pain took place after the tapping, and the tumor gradually became reduced to the size of a man's fist. About August, 1867, anasarca of the legs took place and albumen was abundant in the urine. Nausea, sickness, and headache supervened, and she gradually sank on October 29, 1867, retaining consciousness to the last hour or so. Many professional opinions were obtained on the case, and all were led to diagnose ovarian disease with complication. The *post-mortem* examination revealed a large cystic kidney on the left side, with total destruction of the secreting portion; and the right kidney was undergoing yellow degeneration, and was enlarged to twice its normal size. The chief points of interest in the case arise from the fact of its exhibiting a series of symptoms perfectly compatible with the belief in its ovarian origin; its existence for so long a period (fifteen years); the absence of elements of urine in the fluid evacuated by the tumor; and the ultimate relief offered by the puncture through the abdominal walls of so large a cyst, together with the comparative freedom from suffering and inconvenience, notwithstanding the large amount of disease found after death.

In the discussion which followed the reading of the case, Mr. Spencer Wells said:

There were occasional exceptions to the rule that large tumors of the abdomen, with intestine crossing them in front, were renal and not ovarian. Dr. Keith, of Edinburgh (who was then present), had seen two cases, and he (Mr. Wells) had seen at least six, where ovarian tumors were crossed in front by adhering intestine. It might not be detected at one examination, because the intestine might be empty; but patients were generally conscious of the passage of air and fluid, and a peculiar cord-like roll was produced when the intestine contracted under the pressure of the hand. If doubt were still felt, a long tube might be passed up the rectum, and air blown in from bellows. In this way the intestine might be inflated, and tympanitic resonance became manifest. The diagnosis in the case brought forward by Dr. Rose was unusually difficult, because it was supposed that an ovarian cyst was spontaneously emptying itself through the bladder; and when it became necessary to tap the cyst, the fluid evacuated contained none of the constituents of the urine, nor any thing confirming the suspicion that the cyst might be renal. So with some of the cases which he (Mr. Wells) had published in the *Dublin Journal.* The urine was quite normal, because the diseased kidney had ceased to secrete, and the other kidney was healthy. In a large tumor, weighing between thirty and forty pounds, which he had brought before the Pathological Society with several renal calculi from the pelvis of the kidney, the tumor had filled the whole abdomen and descended into the pelvis. He had seen other tumors of one kidney which had extended across to the opposite side of the abdomen, and also downward into the pelvis. In one case which he had seen recently with Mr. Keyser, the tumor was so distinctly not pelvic in its early stage that a very distinguished physician said it could not be ovarian. But a year later the same physician wondered that he could ever have doubted that it was ovarian, because it seemed so closely connected with the uterus. In this case the cyst was tapped, and a very competent observer, finding colloid bodies and epithelium in the fluid, expressed a strong opinion that it was ovarian. On making an exploratory incision he (Mr. Wells) found a large renal cyst, emptied it, sewed the opening in the cyst wall and abdominal wall together, introduced a drainage-tube, and the result was a perfect cure. So in one of his published cases tapping and drainage led to the complete recovery of a patient with a renal cyst. Simple tapping seemed to be of little use, while tapping and drainage offered very encouraging promise of sucess in cases otherwise incurable.

17.—*Complete Inversion of the Uterus; Reduction and Recovery.* By John Homans, M. D. [Boston Medical and Surgical Journal, August 8, 1867.]

The patient, a primipara, aged twenty-two, was seen by the doctor about thirty-six hours after delivery, she being attended in confinement by a homœopathic physician. No vaginal examination was made at this visit. The following morning, the catheter was employed, and about two quarts of dark-colored, offensive urine were drawn off, greatly relieving the patient's sufferings, which had been paroxysmal in character, and for which the doctor had administered hypodermic injections of morphia. The uterus was found completely inverted, and filling the vagina, but did not protrude beyond the labia. The tumor formed by the inverted uterus was very resistant to the touch, though somewhat elastic; it was smooth and shining, and of a purplish color. The patient was quite pale, and evidently suffering greatly; her pulse was 140. At quarter-past eleven A.M. the patient was etherized, with the assistance of Dr. Charles G. Putnam and his son, Mr. Charles Putnam. As soon as the muscular relaxation was complete, I took hold of the uterus and gently squeezed it with my hand for about ten minutes; then Dr. Putnam relieved me for about fifteen minutes, and in turn I relieved him. As soon as the uterus had become soft and flabby, and was pretty well emptied of blood, I pushed it against a segment of a ring, made by the fingers and thumb of one hand placed upon the abdominal parietes of the pubic region. All this time the uterus was slowly unfolding from its periphery toward its centre. As the hand on the abdomen was getting quite tired, I asked Mr. Putnam to relieve me by putting his hand on the pubic region. He put both his hands there, thus forming a more complete ring than I had done. The uterus was returned quite easily within a very short time after two hands had been used externally instead of one. The whole time occupied in the reduction was three-quarters of an hour. The fundus of the organ was restored to its normal position last, the organ having been gradually rolled out, as a hollow India-rubber is reinverted after an indentation is made in it. The inversion had lasted, if it took place immediately after the completion of the labor, fifty-two hours. The patient's pulse, when she was placed in bed and had partially recovered from the effects of the ether, was 150, and feeble. The essential procedures in reducing this inversion of the uterus were, complete muscular relaxation, the squeezing of the uterus till it was flabby and reduced in size, and the support against pressure, afforded by the hand, forming a more or less complete circle, and placed on the parietes of the pubic region. Patient slept well the night following this operation, and was freely stimulated and nourished for several weeks. A vaginal examination, made on the 30th of March, showed the uterus to be of normal size, and the neck to be somewhat fissured, but not more so than is very commonly the case. Mrs. M. was obliged to cease nursing her child. Her pulse remained above 100 for three weeks after the inversion was reduced, but she steadily gained strength, though very slowly.

On the 16th of April, she had an attack of "milk leg," from which she soon recovered, and is now, with the exception of a slight daily swelling of the left lower extremity, perfectly well.

18.—*On the Absorption of Fibroid Tumors of the Uterus.* [Discussion at the Meeting, May 6, 1868, of the London Obstetrical Society. Medical Times and Gazette, June 20, 1868.]

Dr. W. S. Playfair read a paper on this subject in which he referred to the occasional disappearance of fibroid tumors, and gave a brief account of the literature of the subject, comprising an abstract of the principal cases of the kind which had been described by Sir C. Clarke, Rigby, Ashwell, and other writers. He then gave an account of two cases which had been under his own care, in one of which the tumor was the size of a large orange, in the other of an adult head, both the tumors eventually entirely disappearing. He then discussed the various theories which had been proposed, to account for the occurrence, by McClintock, Spencer Wells, and others; and, referring to the similarity in structure between fibroid tumors and the uterus itself, stated his belief that such disappearance was probably due to a process of fatty degeneration of the fibres, similar to that which preceded the diminution in size of the hypertrophied uterus after delivery.

Dr. Barnes said no doubt all would join in the hope that remedies would be found capable of causing the removoal of fibroid tumors, but he could not see that Dr. Playfair's cases afforded any proof that such remedies had been found. He himself had used bromide and iodide of potassium till he and his patients were fairly tired out with the hopeless pursuit. He did not admit that the comparison drawn between fibroid growths and the healthy growth of the uterine muscle under the stimulus of gestation was complete or to the point. He did not find in fibroids those large fibre-cells which formed during gestation, and which were so readily melted down and absorbed afterward. The fibroid was denser; it contained more fibrous tissue; it was very much cut off from the vascular system of the uterus —the fact that it was often so readily enucleated was proof of this. The question was very much one of diagnosis, and the diagnosis of fibroids was often difficult. The cases of Dr. Ashwell did not, at the time of publication, command the confidence of the profession, and one of those related by Dr. Playfair seemed to be simply a case of pelvic inflammation. We ought not to be satisfied to accept a case as one of fibroid tumor, unless it was indicated by one of two tests—first, the passage of the uterine sound beyond the normal length; and, secondly, the mobility of the tumor and uterus *en masse* between the finger on the os uteri and the hand outside. The cases narrated were not established as fibroids by these tests. He had certainly seen fibroids diminish and disappear, and especially in several cases where, on account of hæmorrhage, he had repeatedly incised the cervix, but he had not seen medicines exert the smallest influence.

Mr. Spencer Wells concurred with Dr. Barnes in his doubts as to the power of medicines in causing absorption of fibroids; but he had no doubt as to the fact that very large fibroids did occasionally disappear. The process was not a very rapid one: it might go on for months or years, and it might not often be quite complete. But he had seen several instances where large tumors, of the nature of which no doubt could be entertained, had entirely disappeared. In one case the process seemed to be one of softening or suppuration, the patient not having much discharge, but suffering constitutionally from symptoms of chronic pyæmia. In other cases the process seemed to be a simple atrophy. In others there was more or less calcification. He thought the chloride of calcium hastened the latter of these processes, as it certainly checked hæmorrhage. Whether it did this by directly modifying the nutrition of the tissue or by leading to atheroma of the nutrient vessels was a question worthy of investigation; for a patient would find a fibroid a lesser evil than a general condition of arterial atheroma. He believed that if too much lime were given for too long a time this condition might be produced, and he had seen two cases where arcus senilis in young subjects, and other evidences of arterial degeneration, had followed long-continued treatment by chloride of calcium.

Dr. Graily Hewitt remarked that as yet we had no trustworthy means of effecting the removal of fibroids by medication. He believed in their occasional but very rare disappearance. Of remedies, he had found a very prolonged use of bromide of potassium and blue pill in small doses act favorably. Pelvic cellulitis was not seldom mistaken for fibroid; hence a possible fallacy respecting the cure of cases.

Dr. Greenhalgh was also of opinion that medicines had but little effect in curing fibroids. He had, however, seen marked benefit from the long-continued use of small doses of perchloride of mercury, with quinine and belladonna, in lessening, and even arresting, the hæmorrhage usually attendant on this affection. That such cases occasionally underwent spontaneous cure he had no doubt: in more than one case he had witnessed such result. He narrated a case in which disintegration of a large fibroid and its discharge by two openings—one in the cæcum and the other in the rectum—were progressing when the patient died, the fact being verified by a *post-mortem* examination. The diagnosis in some cases was by no means easy; thus, he had known a retro-uterine hæmatocele mistaken for a fibroid in the posterior wall of the uterus. In another case, an interstitial fibroid deposit in the anterior wall of the uterus was assumed to have been absorbed by the remedies prescribed, when, much to the surprise of the physician in attendance, a large polypus was expelled into the vagina. Dr. Greenhalgh concluded by detailing the particulars of a case of large fibroid of the posterior wall of the uterus impacted in the pelvis, which he had successfully enucleated by an opening made through the vagina into the growth by the actual cautery.

Dr. Wynn Williams said that the action of bromide of potassium resembled that of iodide of potassium, which, as pointed out by Paget, had the power of causing the absorption of lymph effused within and around these tumors, but not of the proper tissues of the tumors themselves; and in this way he had frequently seen these fibrous tumors of the uterus apparently lessened in size. It was, however, in appearance only, for the proper tissues of the tumors were not in the last degree diminished or absorbed. As regards the last case related by the author of the paper, he considered it to be a case of chronic pelvic abscess. The escape of the pus and the hardness left in the broad ligament could, he thought, leave no doubt as to its nature.

Dr. Playfair said that he did not believe that cases of the entire disappearance of fibroids were of frequent occurrence, but they did occasionally happen, and since writing his paper Dr. McClintock had referred to the subject in an article on fibroid tumors, and had brought forward several additional examples. With regard to the influence of remedies, he had distinctly stated that he did not believe they ever produced entire absorption of the tumor, and that they only acted in occasionally diminishing the size of the growths. He could not, of course, answer for the accuracy of the diagnosis in the cases he had quoted from other authors, although he considered it highly improbable that they had all mistaken some other condition for fibroid tumors, as had been suggested. With regard to his own case, which Dr. Barnes believed to have been one of pelvic cellulitis, he could confidently say that the symptoms were too distinct to make such a mistake possible ; for, in the first place, the swelling was hard and nodular, while the swelling of pelvic cellulitis is smooth, and on bimanual examination it could be freely moved, which is not possible in cases of inflammatory swelling. Then the tumor projected so much into the uterine cavity as to prevent the introduction of the sound, which would have entered readily had it been a case of cellulitis. There was also the metrorrhagia, which had reduced the patient to a state of extreme anæmia, and which certainly was not a symptom of cellulitis.

19.—*Retroversion of the Impregnated Uterus ; Spontaneous Reposition.* By C. C. F. Gay, M. D. [Buffalo Medical and Surgical Journal, October, 1868.]

With a candor well worth imitating, and that fairly entitles the writer to greater respect than would the blazoning forth of a brilliant result, Dr. Gay records a most instructive case, in which, unaware of the existence of pregnancy, he passed a Simpson's sound into the uterine cavity, on three separate occasions (May 5th, 8th and 11th), for the replacement of the organ which was retroverted. The os was extensively ulcerated, and local applications were repeatedly made for the purpose of healing the same. About three weeks (June 7th) after the above use of the sound, the topical applications being meanwhile continued, the uterus was found to have righted itself—the os now inclining backward toward the sacrum, so that it was with difficulty reached. The sound was again used, to determine the position of the uterus. Dr. Gay at this time concluded that the woman was pregnant. No unpleasant result followed the local treatment, but the patient went on to full term, and was delivered of a healthy, well-formed male child. The impunity with which these manipulations were done should not be distorted into a justification for rough handling of a gravid uterus. Dr. Gay remarks:

The failure to diagnose early the pregnancy of this woman is not the most interesting feature in making up the record of this case. Had the incomplete diagnosis led to miscarriage, I doubtless should have excused myself from reporting it; but, as the error did not lead to any such result, I am quite willing to report the error, and to believe that a more interesting feature than that of failure to diagnose presents itself in the fact that a gravid uterus was able to sustain such manipulations with impunity. There were good and sufficient reasons why pregnancy was not diagnosticated. Six years had intervened since the last pregnancy; there were retroversion of the uterus and extensive ulceration of the os and cervix, with regular menstruation; and a firm denial, on the part of the patient herself, that there was a possibility or probability of pregnancy. These several circumstances led me into the error of treating the case precisely as though pregnancy did not exist in reality.

It has been asserted that considerable ulceration of the os with much leucorrhœa precluded the possibility of pregnancy. It has been asserted, moreover, that a retroverted uterus could not become impregnated; facts presented in this single case fully controvert the theory that diseased os and misplaced womb must of necessity always subject the female to the sterile condition. I have sufficient evidence to warrant the assertion that this lady's womb was retroverted before the pregnancy, and that it had been so displaced since her last confinement; for, notwithstanding this patient has since been in labor with a stillborn child at term, the uterus at this present writing is still retroverted, and became so after the birth of both of the last two children, although every precaution to prevent and guard against such displacement was made use of. On examination I have found the uterus retroverted as at first, and there in its chosen dislocated position it remains, and refuses to respond to any means, mechanical or otherwise, for its permanent reposition, except it be pregnancy.

The retroverted impregnated uterus is capable, as shown in this case, of accomplishing what the unimpregnated uterus is incapable of doing, viz., of spontaneously repositing itself. This is an interesting fact, and may ultimately lead the way to successful treatment for the permanent relief of this form of displacement, for, if the uterus may be made to occupy its normal position, and to remain in its proper relations with the other viscera within the pelvis during utero-gestation, why may not the unimpregnated uterus be made to do the same by means of appropriate mechanical appliances, or by appeal to the resources of surgery?

20.—*Note on a Case of Rapid Labor.* By Dr. R. P. Ritchie. [Edinburgh Medical Journal, September, 1868.]

On leaving my house on Thursday, the 29th of May last, at ten minutes to twelve o'clock, my attention was directed to a crowd, which I was informed surrounded a female who was ill. I found her pallid and feeble, standing with her back against a wall, while from below her clothes there issued a stream of blood and water. I at once inquired what ailed her; and she stated she had, a few minutes before, while crossing Castle Street, been seized with illness—that she subsequently had a pain, and that something was born. Meantime, a screen having been placed round her, on slightly moving the clothes I observed a placenta lying on the pavement, and on introducing my hand below the clothes, it came in contact with the dependent feet of a child. On further examination, I found its birth was nearly completed, with the exception of the head and right arm, which were at the side of the head. On drawing down the arm, the head farther advanced. I introduced my finger into the mouth, and the child cried before the whole of the head was expelled. This I slightly aided by traction; but the force used was slight, as the weight of the child after drawing down the arm appeared to be quite sufficient to have effected delivery. The position of the child was the most favorable—the toes pointed backward. I divided the cord, and the child was removed. It was a healthy female, apparently of full size. A cab having been obtained, the female was placed in it reclining. A glass of wine was given, and she rallied wonderfully quickly from the shock, which was considerable, but not so great as I would have expected in so serious a complication of circumstances. While on her road to the Maternity Hospital she stated she was a stranger in town, had come from Newcastle, and was proceeding to the railway station to go to Glasgow. She had walked from the street at the west end of the town, and had no pain until she was crossing North Castle Street, when she suddenly felt ill. She also denied that there was any previous hæmorrhage. She supposed that ten minutes might have passed between her first feeling unwell and the delivery being completed. This was her second child, and she had not expected her confinement for another month.

The case is interesting in many respects. I see no reason for doubting the statement of the patient as to the short duration of the labor. The corroborative testimony of some of those around her assures me that the time she stated was nearly correct; for a gentleman passing at the time she assumed her position with her back to the wall had his attention at once directed to her. In other respects the case is also interesting.

1. It was a case of placenta prævia naturally successful. The placenta was lying, as I stated, on the pavement, and, from what I could ascertain, had been expelled at least four or five minutes before my arrival.

2. It was a footling case, undoubtedly the best presentation of the child for effecting rapid delivery after the expulsion of the placenta.

3. The child respired before complete delivery was effected. This, no doubt, with the rapid character of the case, chiefly saved the child.

4. The success of the case was also greatly due to the composure and pluck of the mother.

In a medico-legal view, the case is also interesting. There appeared to be no criminal intention; but, if the child had been stillborn, the case might have formed the subject of inquiry. The accident might have occurred in a private position, and before assistance could have been obtained to complete the delivery; the child might have died; and had delivery after its death been assisted by the mother, there would have been good reason for instituting a criminal inquiry into the circumstances, for the evidence as to its being a case of placenta prævia would have been wanting; and besides, the child has been registered as illegitimate.

21.—*Case of Cæsarean Section, in which the Abdominal Walls were divided by means of Vienna Paste.* Reported by M. L. Ruth, M. D., Assistant Surgeon, U. S. N. [Medical and Surgical Reporter, September 26, 1868.]

This case, which occurred in the Lying-in Hospital of Paris, under the charge of Dr. De Paul, was a case of extra-uterine pregnancy, which had advanced to the sixth month. The fœtus was lodged in the right Fallopian tube. There was every indication that the fœtus had been dead for some weeks, and, as the woman was suffering from the presence of the foreign body, it was determined to extract it; but, with the view of obviating acute peritonitis, it was thought well to try the effect of inducing a gradual local inflammation of the parts, and to divide the walls by repeated application of the Vienna paste. These applications, made in the usual way, by protecting, with adhesive plaster, the parts adjoining the surface designed to be removed; were continued for five days. The first application caused excruciating pain; each successive application being less painful, and onthe sixth day—

June 29*th.*—The dressing having been removed, an opening through the abdominal walls was discovered. This was enlarged by the finger, the parts being disintegrated by the action of the caustic. From this opening, by careful manipulation and dismemberment, a fœtus of normal size was abstracted. The cavity being cleansed, an examination showed that an agglutination of the parts had been effected, the inflammation being local in its character, and not extending to the peritonæum. The patient was calm, pulse normal, no pain, and no symptom of distress. A poultice was now applied, and the patient left under the care of the *internes.*

July 3*d.*—The patient had progressed favorably up to yesterday, when there was a slight retrogression. A full dose of opium was now exhibited, with a decided improvement in her condition. An examination of the parts presented a clean and healthy granulating surface, the edges of which were approximated by means of adhesive strips.

July 6*th.*—The patient still improving. Appetite good, patient in excellent spirits, and no untoward symptom whatever present.

July 11*th.*—She is now able to sit up in her bed. The wound is nearly closed.

July 20*th.*—Patient feels comfortable, no pain; the wound but superficial, and rapidly healing.

July 24*th.*—Unfortunately for the result of this case, the cholera made its appearance in this hospital, and among the other victims carried off this patient. She had, however, so far progressed, that there was no doubt, had it not been for the epidemic, she would have been discharged from the hospital in a very few days cured.

The success of this unique operation leads to the hope that in similar cases the application of Vienna paste may be resorted to with success.

In estimating the value of this manner of operating, it is well to bear in mind the tolerance with which the removal of an extra-uterine fœtus is borne if the operation be deferred till some time after the death of the fœtus. When the operation is performed during the existence of fœtal life, or soon after its extinction, it almost invariably proves fatal. We question much whether any supposed or real advantage offered in this plan of operating is worth purchasing at the cost of the tremendous disturbance that must be produced by the prolonged effects of the escharotic.

22.—*On the Symptoms of Incomplete Rupture of the Uterus.* By Professor C. Hecker, of Munich. [Med.-Chir. Rundschau, May, 1868, and St. Louis Med. and Surg. Journal, November 10, 1868.]

In cases of complete rupture of the uterus, the symptomatology is usually so characteristic that its diagnosis meets with no difficulty. Not so in incomplete ruptures, when the mucous and muscular coats alone are torn, but the peritonæum remained intact. And yet the diagnosis of these accidents is highly important on account of the prognosis, because in these very cases the fatal termination is not only the usual one, but often occurs rapidly, entirely unsuspected.

External examination offers no abnormity, the child remaining in the uterine cavity, unless it be that the peritonæum is lifted up in belly shape by considerable masses of blood—assuredly a very rare case. Internal exploration likewise gives a negative result, mostly because some part of the child probably covers the rent. Moreover, the lesion of function which characterizes the complete rupture — sudden cessation of labor-pains—does not occur here, for ordinarily a regular, although feebler, non-expulsive activity of the uterus continues to be observed.

The subjective phenomena which characterize complete rupture, e. g., the sensation of "giving way" in the abdomen, the rapid collapse, etc., are also nearly always wanting, the subjective condition of the patient often being entirely undisturbed.

Every symptom contributing to assure the diagnosis is therefore highly desirable; and Hecker, basing his assertions on two cases, represents the following as such:

1. A more or less sudden acceleration and smallness of the pulse (the same as in complete rupture), which does not harmonize with the otherwise good condition of the patient; and

2. The development of a tumor in the anterior wall of the vagina pressing backward and downward, caused by the effusion of blood into the areolar tissue between the bladder and uterus or vagina, i. e., by the formation of an extra-peritoneal ante-uterine hæmatocele.

Hecker, therefore, thus states his thesis:

If in the course of a case of labor, perhaps already of an otherwise suspicious character, a rapidly-increasing, firmly-elastic tumor is formed in the anterior wall of the vagina, which cannot be regarded as a prolapse or as a vaginal cystocele, the presence of incomplete rupture of the womb is highly probable.

23.—*Rupture of the Uterus.* By G. G. Townsend, M. D., Natick, Mass. [Boston Medical and Surgical Journal, May 14, 1868.]

Mrs. N.——, aged 35, German, strong, muscular, and florid. She was in labor with her sixth child.

Her previous labors had all been severe, though favorable, owing to a projection forward of the promontory of the sacrum, diminishing the conjugate diameter of the brim of the pelvis more than one-fifth.

On my first examination, the os was fully dilated, membranes unruptured, the vertex was just entering the brim in the first position, face to the left. The pains continued hard and frequent, with apparent slow progress, and no impaction, until 1½ P. M., after which time the head neither advanced nor retreated. At 2½, P. M., being very tired, the patient begged to turn upon her hands and knees, for rest, a position, by-the-by, very common among both Germans and Irish, when left to themselves, and not a bad one, either. Previously she had been lying in our usual position, viz., on left side.

In less than five minutes after her change, she began to complain, though not very urgently, of pain in her bowels, saying she had just such pain in her former labor, and that peppermint relieved it. The labor-pains ceased entirely. Suspecting at once the nature of the case, I gave her some peppermint, and sent at once for my friend and neighbor, Dr. Partridge. He was soon at hand, with ether and instruments. I made an attempt to apply the forceps, with but slight hopes of success, and failed, the head receding before the second blade, though it seemed pretty firmly impacted. I then introduced my hand, encountering a coil of intestine very soon after it entered the cavity of the uterus, brought down the feet, turned and delivered. The head passed with some little difficulty, and the child was still-born.

After the removal of the placenta, the rent could be distinctly traced, and the intestines felt through it. It was anterior, some six inches in length, extending diagonally across the body of the uterus, below the Fallopian tubes apparently. This diagnosis was confirmed by the autopsy.

The patient lived until the evening of July 4th, just three weeks[1] after the accident, sat up several times in a chair to have her bed made, and even walked a few steps to her chair and back again to the bed.

At the autopsy, which was performed by my friend Dr. Lincoln, the abdomen was quite flat, very slightly if at all tympanitic. On dissection, it was found that the anterior portion of the neck of the uterus had entirely sloughed away. The rent extended diagonally across the body of the organ, from the front of the left broad ligament, to the right, involving the right broad ligament, but lying in front of the left. The cavity of the uterus was lined with a grumous fluid. The vagina was somewhat sphacelated at its upper part. The intestines were everywhere bathed in pus, and covered more or less with adhesions. The uterus measured three and a half inches from one Fallopian tube to the opposite, four and a half inches from the fundus to the upper edge of the rupture, and the parietes were ten lines in thickness.

The points of interest in the case are—1. The situation of the rupture, which, being anterior and low down toward the neck, allowed the free escape of the lochia, and afterward of the slough, thus remedying the distention of the abdomen which occurs in these cases, and which was enormous the last time I saw the patient.

2. The comparatively mild character of the pain, and of the collapse, which followed the accident.

3. The remarkable tenacity of life the patient evinced. Suffering from the fearful consequences of her accident, and under the influence of a most depressing remedy, she yet lived three weeks, and at one time walked several steps from her bed to a chair.

24.—*Report of a Case of Rupture of an Ovarian (?) Cyst through the Abdominal Walls.* [Leavenworth Medical Herald, August, 1868.]

Dr. M. A. Campdoros reports this case to the Kansas Medical Society. The patient, fifty-three years of age, had

---

[1] Patient died at 6, P. M., July 4th, having lived four hours into the twenty-second day. So reported when I made the autopsy.—G. C. LINCOLN.

had nine children and one miscarriage; ceased menstruating in 1858, at forty-three years of age. December, 1866, she had what was called an inflammation of the bowels, and on recovery noticed a small tumor, size of a plum, in the lower part of the hypogastric region. April 23, 1867, Dr. C. saw her. "The tumor, of a pyriform shape, as big as an orange, was situated in the mesial line, two inches below the umbilicus. It was hot, and so painful that I could hardly touch it. An examination per vaginam satisfied me that the uterus was not affected." A few days subsequently, the pain and inflammation subsided in a degree, and the tumor remained in this condition until the middle of May, when it burst two or three inches below the navel, and discharged, with a certain quantity of thin liquid, two small, roundish, yellow balls, the size of a cherry. A number of these bodies, thirteen or fourteen in all, were discharged in the course of the summer. The fistula healed up in February, 1868, all traces of the tumor having disappeared, and the patient having fully recovered her health.

We note this case more for the purpose of preventing its being authoritatively quoted as a case of the rare form of subsidence of an ovarian cyst by ulceration through the abdominal walls. The report is lacking both in the evidence necessary to establish the diagnosis, and in a description of the pathological nature of the substances expelled through the fistula. The case should be accepted only with considerable allowances for its correctness.

25.—*Spontaneous Laceration of the Vagina, united with Metallic Sutures; Cure.* [St. Louis Medical and Surgical Journal, July, 1868.]

Dr. W. R. Samples, of St. Louis, here reports an interesting case: June 25, 1868, he was summoned to a woman belonging to the laboring class, and found her much exhausted from a profuse sudden hæmorrhage and from the vagina. Stimulants were administered freely, and the vagina securely tamponed, with the effect of restraining almost entirely the hæmorrhage. In about thirty-six hours, the tampon was carefully removed. The patient being placed in the left lateral semi-prone position, by means of a Sims speculum, an exploration was made. There was found "a rent in the vagina about an inch above the os uteri, extending from the mesian line in front, somewhat irregular in shape, around the neck posteriorly, up into the Douglas cul-de-sac, and from two and a half to three inches in extent." Two days subsequently, the edges of this fissure, unpared, were brought together with four iron-wire sutures, placed at intervals of about three-quarters of an inch. There was every reason to believe that primary union would take place, otherwise the sutures would have been placed nearer together, as in vesico-vaginal fistula. The operator, Dr. Pallen, stated, at the time of the operation, that "the cavity within the edges of the fissure felt like one of old standing, as the finger could be passed above and behind the fundus of the uterus, but not within, in the peritoneal cavity, and that it felt like a cyst (?) or sac." Primary union, however, did take place, and the parts were firmly and closely adherent on the fifth day, there having been, meantime, no inflammation or suppuration. The sutures, however, were not removed until the ninth day.

The history of this case hardly throws any light upon the cause of the laceration, further than a supposition that it might have been, as Dr. Pallen suggested, a peri-uterine hæmatocele, which had pressed down upon the vagina, between it and the uterus, and the sublying tissues, being softened by a pressure from above, gave way at the time the hæmorrhage came on, which took place when the woman was in bed, just after she had twisted her body to the right side to lift an infant child which had fallen on the floor, *and she was in a horizontal position when she so did. The twisting* of the body, by partially turning the trunk and pelvis, evidently concentrated the superincumbent viscera, pressed upon by the abdominal muscles, down upon the uterus and vagina, and thus forced the supposed hæmatocele through the vagina.

Why a hæmatocele was supposed to exist was owing to the fact that the woman had complained ever since her confinement, some three months before, of constant peri-uterine pain, and the presence of a cavity above and behind the vagina rather tended to the belief that it was caused by some substance, most probably blood, effused at the time of parturition.

26.—*Inversion of the Uterus during Abortion; Spontaneous Reposition.* By H. B. Trist, M. D. [Medical Record, March 2, 1868.]

Dr. T. was called to attend a patient aborting at about the end of the fourth month:

On examination, a mass was found apparently engaged in a patulous os, which naturally enough, at first blush, was taken to be the product of conception, and which it was confidently expected would at once yield to slight traction with the index. This procedure, however, failed to detach more than some small portions of membrane and clots. The attempt was then made with abortion forceps, but these were soon put aside, and recourse had to the finger as the safer means. The mass still resisting any safe degree of force, further effort was abandoned, under the impression that abnormal adhesions must exist, which in the course of a day or two would yield, and allow an easy expulsion or removal. At the expiration of this time, another examination revealed the same condition. By attentive and close exploration, a portion of the mass was found to give and to allow itself to be detached, to be peeled off the rest. After removal, it proved to be nearly the entire placenta, the small portion wanting having passed probably with clots at an early period. It was now evident that the elastic, pyriform mass, which in the first instance had been taken for an ovum, must be an inverted uterus, or possibly a polypus. It was deemed expedient to allow a few days' rest before attempting a reduction, there then existing no urgent indication to be met, no hæmorrhage, etc.

At the expiration of about a week or ten days, the same condition was manifest on examination. The mass, about the size of a lemon, was pyriform, elastic, and not of uniform smoothness. The posterior half of the os could be distinctly felt embracing it, anteriorly this could not be distinguished; pressure over the pubes imparted motion to the finger in the vagina, but no fundus could be perceived. A sound could only be carried to the depth of an inch or so, in any direction. Exploration by the rectum, a Sedillot being in the bladder, gave no positive evidence of the pressure or absence of the fundus. Convinced now, from the nature of the case and the results of exploration, that an inversion must be diagnosed, reduction was attempted by firm and continuous pressure on the fundus; the mass apparently yielded and diminished somewhat in size, but complete success failed, and, not being prepared to attempt any vigorous measure, further manipulation was abandoned.

Some days after, Dr. William P. Johnson, a practitioner of great experience in gynecology, saw the case with me. After another minute examination, he insisted that unquestionably we could have nothing but an inverted womb to deal with, and that, so soon as the patient had regained sufficient tone to admit of the safe use of chloroform, reduction had better be attempted. Ten days from that time we again met. The patient was placed in position, the anæsthetic prepared, when, to my great surprise, on the introduction of the index, no fundus uteri was felt; there was the patulous cervix, easily admitting the finger, and there the fundus quite as readily recognized above the symphysis. An inverted womb no longer existed.

Dr. T. comments at some length on this case, showing that abundant evidence is to be found, scattered through medical literature, of the possibility of the occurrence of the spontaneous inversion. We should go still farther, and, in accordance with the latest views, assert that inversion of the uterus is, almost always, spontaneous; and that the older notions of this unfortunate complication, being the result of injudicious interference, are quite, not necessarily always, unfounded in fact. Spontaneous reposition or self-adjustment of the organ is also well recognized to happen occasionally, but not sufficiently often to warrant one in placing any reliance upon this adjustment by the unaided powers of Nature. Dr. T., in describing the mechanism of the inversion and the reposition, suggests that, by the use of the induced current, we may yet succeed in exciting muscular contraction in the special sets of fibres on which evidently the mechanism is dependent.

27.—*Rupture of the Uterus.* By W. W. Grissom, M. D. [St. Louis Medical and Surgical Journal, September 10, 1868.]

This case is notable from the fact that the train of symptoms manifested differed widely from those usually observed in rupture, and there was no collapse immediately following the accident; and the patient survived the shock, to die of consecutive peritonitis and gangrene:

I was called on the morning of the 29th of May, 1868, at half-past 6 o'clock, to see Mrs. McG., æt. 34, in labor at full term with her ninth child. She had been taken with labor-pains at 10 o'clock on the morning of the 28th, though they were not of sufficient severity to prevent her from going about during the day. About 5 P. M. the pains had increased so that she was put to bed. During the night the pains were of considerable force, and about half-past 5 A. M. of the 29th she had a very severe one, from which time the pains ceased altogether. When seen by me at half-past 6 o'clock her pulse was 85 per minute, there was no marked anxiety of countenance, and she appeared perfectly rational. She complained only of cramps in the bowels; she had taken a dose of oil the night before, which had acted well, and, there being some distention of the bladder, I drew off the urine with the catheter. On making a vaginal examination, I found the head lodged in the superior strait, the os fully dilated, the cord prolapsed and no longer pulsating; hæmorrhage had been very slight. Supposing it to be simply a case of inertia of the womb, I administered wine of ergot in drachm doses every twenty minutes, until she had taken about six drachms. Finding that the ergot produced no effect, and believing it would be necessary to deliver by the forceps, I dispatched a mesenger at 8 o'clock for Dr. Prewitt, with the request that he would bring a case of instruments. When he arrived he made an examination per vaginam, and found that the head had receded beyond reach, and he expressed a belief that rupture of the womb had taken place.

The further steps in the delivery I give in Dr. Prewitt's own words: "On introducing the hand, it could be readily passed through the rent, which was situated anteriorly, into the cavity of the abdomen. The head of the child was resting on the brim of the pelvis anteriorly, with the abdomen toward the spine of the mother. The womb could be felt firmly contracted in the right iliac region, and was at first supposed to be a tumor which had something to do in obstructing the labor and causing the rupture, as it was not anticipated, from the readiness with which the hand could be passed through the rent, that the child had passed completely into the cavity of the abdomen.

"Yet such proved to be the case. The womb was resting, as stated, in the right iliac region, firmly contracted, and partially clasping the detached placenta. Finding the feet could be readily reached, and believing, from the facility with which the hand could be passed through the rent, that the child could be drawn through it, I at once proposed to turn and deliver, and Dr. Grissom concurring, the woman having been placed under chloroform, we proceeded to make the attempt, exercising great care not to entangle the bowels or omentum. Version was easily accomplished, the process being untrammelled by the contracting uterus; the feet and body were readily drawn through the rupture and delivered; but, there being no expulsive force, the head, after passing the superior strait, did not glide readily along the plains of the pelvis. It became necessary to force the face into the hollow of the sacrum by manipulation, which was accomplished with the finger and vectis. Finding still great difficulty in delivering the head, we determined to perforate, which was accomplished through the occipital bone. A blunt hook was introduced, and with the finger in the mouth, the delivery was readily completed. The child was a male, weighing about nine pounds. The placenta was then removed, very little hæmorrhage taking place. On introducing the hand, the rent seemed to have taken place in the anterior wall of the vagina, and involving about one-third only of the wall of the uterus proper, the hand gliding readily through the opening in the yielding tissue."

The patient died on June 4th, six days after delivery, the history of the case meanwhile giving evidence of well-marked peritonitis.

Post-mortem Examination 14 *Hours after Death.*—On opening the cavity of the abdomen, a considerable quantity of dark-colored offensive fluid escaped; the odor at once indicated gangrene. The bowels were found very tympanitic; their peritoneal surface was covered with lymph which glued the bowels together, and to the abdominal walls; the omentum was gathered into a roll, and adherent to the parietes in front; the uterus could be seen projecting above the brim of the pelvis, and smeared with lymph; the colon was very much distended, and in the right iliac region very dark; on seizing the uterus, it was found to rest closely against the anterior wall of the pelvis, and partially glued to it by lymph; the adhesions of the uterus to the colon and surrounding parts in the right iliac region seemed firmer and of longer standing than those of other parts; on removing the uterus, the rupture was not found to involve the vaginal wall, as was supposed by Dr. Prewitt at delivery, but to commence just above the junction of the vagina with the cervix, anteriorly and to the left of the median line, and extending upward and inward so as to present an opening in the uterine walls proper of about four inches, though the opening in the peritonæum was greater in extent and more to the left. The edges of the rent were ragged and gangrenous; the bladder was empty and contracted; the veins of the broad ligaments, especially those of the right side, were enlarged and gorged with dark clotted blood; the symphysis pubis presented posteriorly an unusually projecting ridge, which may have had something to do in determining the rupture. There was no lodgment of any portion of the intestines in the rupture; in fact, the close apposition of the anterior wall of the uterus and vagina against the bladder, symphysis, and lower portion of the abdominal wall, had virtually closed the opening.

28.—*Rupture of the Cervix Uteri.* By A. D. Sinclair, M. D., Boston, Mass. [Boston Medical and Surgical Journal, February, 20, 1868.]

Mrs.——, æt. 34, was taken in labor with her fourth child about 3 o'clock, A. M., on February 21, 1864. She had been unfortunate in previous confinements—the first was tedious, terminated by the use of forceps; the second complicated by prolapse of the cord, causing death of the fœtus; the third ended in giving birth to an atrophied and premature dead child. Her last labor took place a year previous to the above date. On taking charge of the case, at 5 o'clock, A. M., the vagina was found distended by the bag of waters, and the breech ascertained to be the presenting part of the fœtus. The pains were good, but, as is usual in breech cases, the progress of the labor was slow. At 9 o'clock, A. M., the left hip had engaged in the upper strait of the pelvis. Soon after, I left the room for a few moments, and on my return was informed by the patient that the pains had left her back, and that she had just experienced the feeling as if something had torn within her, followed by a distressing and burning sensation in the abdomen. She lay perfectly quiet, and answered questions distinctly, but frequently referred to the abdominal uneasiness. Pulse 132. Labor-pains had ceased. On examination, my worst fears were realized. The fœtus had receded beyond reach, and blood flowed somewhat freely from the vagina. That the uterus had ruptured was beyond doubt, and the husband was informed of the sad state of things. In order to give the mother a chance of life, it became necessary to remove the fœtus from the cavity of the abdomen. Dr. Reynolds was called, and kindly rendered assistance in the difficult matter of extracting the child, which was accomplished under ether, in an hour from the time that the rupture took place. On introducing the hand into the abdominal cavity, the uterus was found lying among the intestines, empty and pretty firmly contracted, its cervix torn transversely to such an extent that a small pedicle only remained on the left side. No remarkable change took place in the case during the day, the patient being kept more or less under the influence of ether to prevent suffering. She gradually sank, and died in twenty-three hours after the accident.

Miscellaneous and Scientific Notes.

After our last number had gone to press, we received from Dr. Gaillard, of Louisville, Kentucky, advance proofs of a correspondence between Dr. W. O. Baldwin, of Montgomery, Georgia, and Dr. J. C. Nott, of this city, formerly of Mobile. This correspondence is printed in the April number of the *Richmond and Louisville Medical Journal*, and relates to the part which it is hoped the physicians of the South may take in the meeting of the American Medical Association. The disaffected portion of the profession, at the South, base their action upon the disposition made by the Association, in 1864, of the so-called Gardner resolutions. These resolutions, it will be remembered, related to the exclusion of medicines, medical and surgical instruments, and appliances, from the list of articles "called contraband of war." Dr. Baldwin, in discussing this matter, shows very properly, we think, that the Association were going out of their legitimate path in entertaining the resolution, and that their rejection was the only thing that could be consistently done in the premises.

The correspondence on both sides is in the highest degree manly and creditable, and for our own part we join most heartily in the spirit and letter of the same, fully satisfied that the course recommended by these gentlemen must prove a ready means of effacing the bitter recollections which may have been left in the minds of many by the action of the Association.

If Dr. Nott, who lost two sons in the war, and Dr. Baldwin, whose only son also perished in the struggle, and Dr. Gaillard, who came out of the struggle maimed for life, can thus nobly come forward and extend the hand of friendship, asking that every unkind recollection may be forever forgotten, there ought certainly to be no hesitation on the part of any others of the profession about adopting the same manly and dignified course.

THE MORAL TREATMENT OF INSANITY.—There are one or two points of moral treatment not often alluded to, but upon which it may not be useless to dwell for a moment. The first is the practice, very general among the people at large, and, it is to be feared, only too common in hospitals, of pretending to believe, and even encouraging, the delusions of the insane. It is a false method, and injurious as it is false. Like falsehood in all its forms, it works to evil ends. No honest, true, and faithful "minister to a mind diseased" will ever yield assent to the delusive ideas and notions of his patient. Much less will he openly express his belief that they are true, and treat his patient as if they were so. He who, having charge of an insane man, asserting himself to be Julius Cæsar, Napoleon, or any other military hero, accords pretended belief of that assertion, addresses his patient by the assumed name or title, and, last and worst, decorates him, or permits him to be decorated, with military garments, is false to the principles and objects of his calling. He is confirming the insanity of his patient, not curing or ameliorating it. And what is true in this more strikingly illustrative case is true as applied to delusion in all its manifold forms and phases. The reason is obvious. The delusion appears to be truth to the insane man. He asserts it to every man he meets, and all declare it to be true. He now has the evidence, not of his own convictions alone, but of what he believes to be the convictions of other men. He reasons upon this as logically as if not insane. What all believe to be truth cannot well be error. Thus his delusion becomes fixed. What shall afterward eradicate it? No superintendent of a hospital can be too careful, not only as regards himself, but all who are employed in the institution under his care, to see that the influences surrounding his patients do not tend to perpetuate delusion rather than to obliterate it.

Another point to which allusion has been made is closely allied to the one already mentioned, although not identical with it. It is the propriety of conversing with the insane upon the subject of their mental disorder.

When accompanying Dr. Damerow, "Director" of the large hospital at Halle, in Prussia, through that establishment, I was surprised at the freedom with which he talked to his patients in regard to their insanity. The example has not been forgotten, and, since that time, I have pursued the practice to a much greater extent than before. If properly approached, a considerable number will enter into conversation upon the subject, and, apparently, in some instances, with restorative benefit. The expressions, "There is no use in arguing with the insane," and "You can't cure insanity by argument," are not unfrequently heard. How true soever they may be as general propositions—and they are emphatically so in many cases—it is *not* universally true that no useful impressions can be made in this way. At one time, when at Bloomingdale, I had two patients, in different wards, both of whom claimed to be Jesus Christ. I one day had them brought together, and when one of them had just asserted that he was Jesus, I said to him, "Here is another man who says that he is Jesus." He looked at the man with an aspect of surprise, and in a few moments said, "There must be something wrong in this matter: we can't both be Jesus." At any rate, it must be clear to every one, that appropriate argument against delusion, and the knowledge on the part of the patient that no one but himself believes the delusion, must, in many cases, eventually have a very different effect from assent to the delusion and encouragement of it by others.—*From Report of Dr. Pliny Earle, Supt. State Lunatic Asylum, Northampton, Mass.*

DEATH OF DR. ALEXANDER H. STEVENS.—At a special meeting of the New York Academy of Medicine, held April 2, 1869, for the purpose of paying a tribute to the memory of the late Alexander H. Stevens, M. D., the following resolutions were unanimously passed:

1. *Resolved*, That the decease of ALEXANDER H. STEVENS, M. D., late President of the New York Academy of Medicine, on the 30th day of March, 1869, at the advanced age of eighty years, is a fit occasion for the members of the Academy to express the high estimation in which he was held, and their deep sorrow at his departure.

2. *Resolved*, That during his long and useful professional career, in which he attained the highest rank as a learned and accomplished instructor and a skilful and successful practitioner of the healing art, his uniform honorable conduct and great moral worth, his untiring zeal for the public welfare, and humane and sympathizing bearing, ennobled our calling, and will ever endear his memory to our hearts.

3. *Resolved*, That the removal, by death, of one whose mature professional experience and eminent skill have so long been made available for the relief of his suffering fellow-creatures, is to be regarded as a great public loss.

4. *Resolved*, That a copy of these resolutions, duly authenticated by the signatures of the President and Secretary of the Academy, be communicated to the family of the deceased, with the assurance of our heartfelt sympathy in their bereavement.

5. *Resolved*, That these proceedings be published in the daily papers and medical journals, to be designated by the President and Secretary.

6. *Resolved*, That, when we adjourn, we adjourn to attend the funeral of the deceased.

H. D. BULKLEY, M. D., *President*.
E. H. JANES, M. D., *Secretary*.

AT a meeting of the Island Hospital Medical Board, held on the 1st inst., the President, Dr. James R. Wood, announced the death of Alexander H. Stevens, M. D., LL. D. A committee was appointed, consisting of Drs. James R. Wood, Austin Flint, Sr., and Frank H. Hamilton, to draft resolutions expressive of respect to the memory of the late Dr. Alexander H. Stevens. Dr. Wood reported the following resolutions, which were subsequently adopted:

Resolved, That it becomes the Medical Board of the Island Hospital to take official notice of the decease of Alexander H. Stevens, M. D., LL. D., not only in view of his distinguished relation to the profession at large, but especially from his connection with the early history of the charities of Blackwell's Island.

Resolved, That we thus record our acknowledgment of his early and eminent services in the separation of disease from crime and pauperism, in the correction of abuses which their indiscriminate union had previously entailed, in the systematic direction of professional labor to the achievement of its legitimate results, and in the inauguration of that hospital system, of which the erection of this great hospital is the ultimate result.

Resolved, That in the completeness and symmetry of his character, in which soundness of judgment was perfected by general and classical culture and great professional learning and sagacity; in which superior abilities and entire self-reliance were shaded by delicacy of feeling, modesty, and refinement of manners, we recognize the justness of the distinction which he attained, and through which he at once elevated the standard of his profession, and in himself gained for it the respect of the community in which he lived.

Resolved, That in his death we are called upon to mourn the loss of the last of the great surgeons of the preceding generation. In death as in life his name is associated with Mott and Francis, who, passing from their labors here, leave to us their memory and example.

Resolved, That these resolutions be entered upon the records of the Board, and that a copy, properly authenticated, be sent to the family of the deceased, with the assurance of our sympathy in their bereavement, and that these proceedings be published in the medical journals and daily prints of this city.

JAMES R. WOOD, M. D., *President*.
ROBERT WATTS, M. D., *Secretary*.

DEATH OF DR. DEWITT C. ENOS.—At a stated meeting of the New York Academy of Medicine, held March 18th, the following resolutions, presented by Dr. A. C. Post, were unanimously adopted:

Resolved, That this Academy has heard with profound regret of the decease of its late fellow, D. C. Enos, M. D.

Resolved, That the Academy sympathizes with the medical profession, and with the citizens of Brooklyn, in their loss of an able and accomplished practitioner and teacher of the healing art, and of a public-spirited and useful member of the community in which he resided.

Resolved, That the Academy sympathizes with the family of its deceased fellow in the painful bereavement to which it has been subjected.

Resolved, That a copy of these resolutions be forwarded to the family of the deceased, and that they be published in the medical journals of this city.

H. D. BULKLEY, M. D., *President.*
E. H. Janes, M. D., *Secretary.*

Dr. Robley Dunglison died in Philadelphia, April 1st. Although not engaged in the active practice of his profession, few men have exercised a greater influence over the minds of their contemporaries than Dr. Dunglison, through his distinguished abilities as a teacher and a writer. Born at Keswick, Cumberland, England, in 1798, and graduating in 1819 in London, he was invited to this country in 1824, to take part in the establishment of Jefferson's favorite project, the University of Virginia. From this arose an intimate acquaintance with Jefferson, Madison, and other great men of a past generation, which naturalized him at once in his adopted country, and he thenceforth became in all respects thoroughly American. In 1833, he left the University of Virginia for a chair in the University of Maryland; and when in 1836 the Jefferson Medical College in Philadelphia was reorganized, he was invited to fill the Professorship of Institutes of Medicine. Here he remained for more than thirty years, during a large portion of which time he was Dean of the Faculty; and the extraordinary success of the institution was largely owing both to his attractive courses of lectures and to the remarkable tact and practical sagacity with which he administered its affairs. He kept to his post and faithfully discharged its duties for some years after failing health admonished him to seek the repose he so much needed, and he did not retire until the close of the session of 1868.

Widely as Dr. Dunglison was known as a teacher, his reputation as a writer was even more extensive. He had commenced his career of authorship even before he left England, by a work on the Diseases of Children, and from that time for forty years his pen was rarely idle. Besides the editorship of various works, ten solid octavo volumes attest the extent and variety of his original labors. In a science so rapidly progressive as that of medicine, even the best books speedily grow out of date; but Dr. Dunglison's industry kept his works on a level with the advance of knowledge, and most of them in repeated editions maintained their position for a period far longer than is generally allotted to the life of a scientific book. His "Medical Lexicon," especially, is one which, after more than thirty years, still holds its place with undiminished popularity. For such a labor as a dictionary of medical science he was particularly fitted by his close and accurate philological culture, the wideness of his scientific acquirements, and the persevering industry which no labor could appall. It has, therefore, passed through unnumbered editions, and is an acknowledged authority wherever the English language is spoken. It is his appropriate literary monument.—*Publishers' Circular*.

Dr. T. H. Turner, of Union City, Tenn., reports to the *Richmond and Louisville Medical Journal* the case of a girl eight years of age, weighing 110 lbs., who possesses all the beauty and symmetry of conformation of a young lady of sixteen. She has menstruated regularly every month of her entire life, the flow continuing twenty-four hours, and is always attended by a slight headache or sensation of fulness in the head. When born, she weighed eight pounds, and possessed the proportional symmetry of person now seen in her case.

Fresh Air for the Consumptive. By Dr. Henry I. Bowditch.—Build your houses in the country, in preference to any place near the sea-coast. In the country choose a slope rather than a plain to build upon, and where the sun can have full access to it, if possible, all the day. Be sure (if need be, by effectual sub-drainage) that the soil is thoroughly permeable to water. Let no moisture from the soil, from any source, be permitted to distil its pernicious influences upon the future dwelling or its inmates. Let the rooms be large, of substantial breadth rather than height, and so pierced by windows that the air may have a bounteous and free entrance and exit. Let fireplaces be built in every room and chamber—fireplaces made for real use, not kept for show, and not closed with iron plates which are to be pierced for air-tight stoves. Eschew all furnace-heat, except for warming the entries and corridors.

Outside the house let there be ample space for air and sunlight. One or two trees may be permitted to grow near the house, but not to overshadow it, for nothing but evil comes from too much shade, either of trees or climbing vines. Both of these may very materially prevent the warm rays of the sun from reaching and bathing the exterior, or from penetrating the interior of the house, which they should be allowed to do freely, even in the depths of summer. Nothing so deadens the atmosphere as the too constant closure of the windows, blinds, and curtains, whereby light and heat, as well as fresh air, are excluded. Every morning let the windows be opened widely, so as to drive off the remains of foul air that has necessarily accumulated from the sleepers during the previous night. Every night let a part of the windows be left open, and if possible at the top and bottom, so that during sleep there may be still a plenty of fresh, unbreathed air for the children and adults to use. Of course the amount of space thus opened will vary with the season; but often, even during our Northern winters, especially in a furnace-heated house, a small aperture, at least, may thus be left. Two or three extra blankets only will be needed for any coldness thus caused.

As to the value of fresh air, alike for the healthy and the invalid, there seems to exist great doubt in this community. Even the healthy have no real faith in its efficacy as a means of giving health. Invalids, almost without exception, we have to educate to that faith. They have so many doubts about the weather. It is too cold, too hot, too windy, or too blustering. It is cloudy, or an east wind prevails. These and a hundred other trivial deviations from perfect weather are noted, and the unfortunate invalid quietly stays within doors day after day to avoid them. Nothing is more pernicious, no behavior more unwise. Both invalids and healthy persons ought to eschew all such views as arrant folly. "Whenever *in doubt*," we say to our patients, "about going out, *always go out*. If a violent storm is raging, to which no one would willingly expose himself, then keep to the house, but the moment it ceases, seize the occasion for exercise out of doors." "It would be better," said the late John Ware, "for everybody, sick and well, to face every storm, than to be fearful, as we now usually are, of even a trace of foul weather."—*Atlantic Monthly for March.*

HAIR-BLEACHING FROM NEURALGIA.—The influence of neuralgia in decolorizing the hair is well shown in the case of a patient lately under Dr. Murray's care in the Great Northern Hospital. This woman, who was admitted on account of a fibrous tumor of the uterus, was remarkable in having the internal half of one eyebrow and the corresponding portion of eyelashes perfectly white, she being a brunette. It seems that three or four years ago, having gone to bed well, she was attacked during the night with a very severe spasmodic tic, which lasted only a few minutes; and in the morning the hair was permanently bleached.—*The Lancet.*

NATIONAL CONVENTION FOR THE REVISION OF THE PHARMACOPŒIA OF THE UNITED STATES.—At the meeting of the Convention held in May, 1860, the following resolutions were adopted:

1. The President of this Convention shall, on the first day of May, 1869, issue a notice, requesting the several incorporated State Medical Societies, the incorporated Medical Colleges, the incorporated Colleges of Physicians and Surgeons, and the incorporated Colleges of Pharmacy, throughout the United States, to elect a number of delegates not exceeding three, to attend a general Convention to be held at Washington, on the first Wednesday in May, 1870.

2. The several incorporated bodies, thus addressed, shall also be requested by the President to submit the Pharmacopœia to a careful revision, and to transmit the result of their labors, through their delegates, or through any other channel, to the next Convention.

3. The several medical and pharmaceutical bodies shall be further requested to transmit to the President of this Convention the names and residences of their respective delegates, as soon as they shall have been appointed, a list of whom shall be published, under his authority, for the information of the medical-public, in the newspapers and medical journals, in the month of March, 1870.

In compliance with the above resolutions, the President of the Convention announces that a meeting will be held at Washington, D. C., on the first Wednesday in May, 1870, and requests that the several incorporated bodies shall, after a revision of the U. S. Pharmacopœia, send the results of their labors to the Convention, and further requests that they transmit to the President the names and residences of their several delegates so soon as elected, that the list may be published.

GEO. B. WOOD,
Pres. of the Convention of 1860.

FROM the report of the State Engineer of New York, for the year ending September 30, 1868, we learn that, on the steam railroads of this State during the year, 302 persons were killed, and 358 injured. On the horse railroads 13 were killed and 90 injured. The number of passengers carried on the steam roads was 18,434,300, and on the horse railroads, 146,326,486.

By a report which we find in the *Lancet*, it appears that in Prussia, for the year 1867, 230 persons were killed, and 305 wounded, on the railways in that kingdom. The total of passengers conveyed on these roads during that period was 38,766,866. Curiously enough, only two out of the killed were passengers. All the rest were either employés, or were killed while incautiously endeavoring to cross the tracks.

HYPERTROPHY OF ONE-HALF OF THE BODY.—Prof. Samuel Logan reports to the *New Orleans Journal of Medicine* the following interesting case:

O. B., daughter of Mr. T. B., at present a resident of Brashear City, aged four years; well grown for age; parents, as well as self, are natives of Louisiana; has seven brothers and sisters, all of whom are healthy. The parents are both healthy in every respect; the mother has borne twins three times, the child who is the subject of these notes not being, however, one of the twins. The family history as regards health is excellent, except that one of the mother's brothers has two out of six children deaf and dumb, but the mother of these children is delicate and in no way related by blood to the family of this child.

About ten days after birth, the right half of the person of the infant was found to be larger than the other, and since that time the disproportion has seemed steadily to increase. She is now a strong, hearty child; but the disproportion is marked in every particular, more so, however, when the opposite extremities are compared. One leg is about an inch larger than the other, causing a peculiar gait, and the foot requires a shoe at least one and a half or two sizes larger, and the two arms and hands show a corresponding disproportion. The difference is, of course, not so marked, but can be readily seen, in the head, the eyes, the nose, the tongue, and the trunk all the way down. The only very serious attack of sickness from which the child has ever suffered, she experienced in September, 1867, when she was very ill with yellow fever, having had black hæmorrhage by the bowels. I am informed that her recovery from this attack was tedious, and that, about ten days after convalescence was considered established, a portion of the alveolar process of the lower left maxillary, containing one incisor and a canine tooth, the latter embryonic, sloughed off. Since this she has been restored to her usual good health.

A case, analogous to some extent to the above, is quoted in the *American Journal of Medical Sciences*, for July, 1868, from Virchow's *Archives*, xxxvii., page 410. In this instance, recorded by Dr. Pessaner, the hypertrophy was confined to the left side of the head alone, and was by conjecture attributed to an injury inflicted on the fœtus while in utero.

NEW MODES OF PREPARING OBJECTS FOR THE MICROSCOPE.—In Mr. Lockhart Clarke's Essay on the "Intimate Structure of the Brain," contained in the "Philosophical Transactions for 1868," we read that Gerlach now hardens the cord in a solution of bichromate of ammonia of the strength of from one to two per cent. The sections are then put into a solution of one part of chloride of gold and potassium to 10,000 parts of water, slightly acidulated either with vinegar or hydrochloric acid, for ten or twelve hours; when the white substance becomes of a pale lilac, while the gray substance is scarcely colored. They are then placed in a mixture of one part of hydrochloric acid to 2,000 or 3,000 parts of water for a few minutes. After this the sections are steeped for about ten minutes in a mixture of one part of hydrochloric acid to 1,000 parts of sixty per cent. alcohol, and then for some minutes in absolute alcohol; after which they are made transparent by means of creasote, and put up in Canada balsam. Mr. Clarke adds, "This is rather a complicated process." A much simpler method has been proposed by M. Rauvier in the last number of Dr. Brown-Séquard's *Archives of Physiology*, which consists in the employment of picric or carbazotic acid. This acid is only moderately soluble in water, and a saturated solution may therefore be employed. It possesses the further advantage of being very cheap. It is admirably adapted for all tissues containing much blood, and therefore for specimens of liver, lung, etc. It appears to act by effecting coagulation of the albuminous substances, though, unlike alcohol and chromic acid, it does not occasion any fusion of the constituents of the tissue. The red globules retain their form and characters extremely well. The portion of tissue required to be examined should be plunged into the solution, and after the lapse of twenty-four hours it will be found to have acquired sufficient firmness to permit of very fine sections being made with a razor. The saving of time by this method, as compared with the chromic acid, is immense. The preparations will take color from carminate of ammonia, and may be preserved in glycerine.—*Lancet.*

How shall we Heat our Houses?—Nearly as much bosh is said and written on the subject of heating buildings as upon the subject of ventilation. In fact, the subjects are so intimately related, that it is almost impossible to consider them separately. We believe that the whole subject has been too elaborately treated by those who, in aiming to be ultra-scientific, have failed to be practical.

There are four classes of heating apparatus which have had more or less favor, and some of which have been very generally used, viz.: Open fires in grates or fireplaces, enclosed fires (including the whole generation of coal, wood, and gas stoves), steam-heaters, and hot-air furnaces.

Of all the devices which the evil genius of invention ever put into the head of man to destroy health and comfort, we believe hot-air heaters to be the very worst. Nothing but the utmost care, joined to the best constitution, can prevent an army of ills from subduing the health of those exposed to the influences of these agents of destruction. We speak from knowledge, having had a large experience in their workings, and the opinions we here express are based upon sound science. It is almost impossible (the experience of those who have had the management of hot-air furnaces will bear us out in this) to so adjust them that an equable temperature can be maintained in any large building. They are most sensitive to external winds, which, as all acquainted with the subject know, influence to a great extent the supply of air from without. Even if vaned hoods be placed over the external openings which admit the vital fluid, it will at once be seen that the varying strength of a wind, blowing from any direction, will render the supply fitful.

But this is not the only, nor the worst evil, attending the use of hot-air furnaces. Recent researches have established, beyond a doubt, that external warmth should be received by radiation; and that any method of warming the body by contact of its surface with a heated fluid is defective and sure to be attended by evil consequences.

Leeds, in his lecture on ventilation, says: "Convected heat is the great curse of the American people. It is that dry, lifeless, withering, debilitating, poisoned stuff with which most of our best houses and public buildings, and, most unfortunately, many of our school-houses, too, are filled and warmed, and which is filling our systems, and warming and drying all the life and substance out of about two-thirds of the people of this country."

The same lecturer points out that the lower the temperature of the air we inhale, the more readily and copiously the lungs eliminate carbonic acid, and the languor and depression we feel, on a hot summer day, is attributed to this cause. In the hot-air system of warming, the surface of the body cannot be kept comfortable unless the air be maintained at a temperature much higher than necessary when radiant heat is used.

Professor Silliman has also pointed out that the combustion of organic matter which the air contains partially unfits it for breathing, which adds to the category of charges against this most irrational way of heating rooms.

Bad as the system is, gas-stoves are worse; at least such as provide no escape for the gases of combustion. They may, perhaps, be admissible in summer for culinary purposes, when doors and windows are opened wide, but we should as soon think of sleeping in an apartment connected by an open pipe with the nearest sewer as in a close room warmed by a gas-stove.

There remain stoves, and steam apparatus, and grates or fire-places, to which, in the order named, we prefix the adjectives good, better, best. A great hue-and-cry has been raised over the effects of stoves upon health. While we admit they have faults of both a positive and negative character, we believe these faults have been much over-rated. It must be confessed, however, that cast-iron stoves are open to the charge of not fully imprisoning the poisonous gases of combustion, while in other respects they leave much to be desired. It is doubtful, however, whether any thing will be devised that, for all classes of people, in all conditions of life, could take the place of the cast-iron stove.

Steam heaters, although not so good as open grates or fire-places, come so near perfection, when properly constructed, that, when the consideration of their adaptability to heating large buildings is taken into account, they may be said to be the best of all the means yet invented for general heating purposes. They are deservedly popular, but the highest ideal of comfort, health, and cheerfulness in a heating apparatus seems to us inseparable from the open fire, with its cheerful glow, and its outward draught, which sucks in and devours all poisonous exhalations. It makes dust in a room, and this provokes good housekeepers to wrath, but, upon our own temper, we have found its effects to be most bland—*Scientific American.*

CUBIC SPACE *vs.* PYÆMIA.—While the question of hospitals and mortality is engaging public and professional attention, it will not be amiss to note a recent occurrence in one of the London hospitals bearing upon the question of the influence of hospital air. Some few weeks back a gentleman of middle age, while riding in Hyde Park, sustained a compound comminuted fracture of the leg, and was carried to St. George's Hospital. He was placed in one of the empty wards of the new wing, of which the beds had only been occupied for a few weeks some months back, and in which no case of pyæmia had ever occurred. He thus enjoyed some 15,000 cubic feet of fresh air drawn straight from the parks; he received, of course, every surgical attention and separate nursing, and yet he died of pyæmia after a week or two. Separated from the empty ward by a staircase is the ordinary accident-ward of the hospital, and here three or four bad fracture cases have made perfect recoveries, though enjoying an average of only 1,200 cubic feet of air. It is as impossible to put this unfortunate death down to "hospitalism" as it would be to attribute to the same cause the death from pyæmia of a gentleman who recently died from that disease, after the reduction of a simple dislocation of the humerus, in his own house at the West End. —*Lancet.*

Dr. Alcock has described a very simple method of preserving animal specimens for minute dissections. It consists simply in preparing a saturated solution of corrosive sublimate in alcohol, and when a dissection under water is in progress a small quantity of the solution is to be added from time to time if there are observed the slightest evidences of decomposition. This may be repeated as required, but no more of the solution is to be used than absolutely necessary. By the time the dissection is completed the specimen has become imperishable, and may be mounted for the microscope either wet or dry.

In connection with the cases reported by Dr. A. H. Smith in this number of the Journal, we would refer to the fact that at the New York Hospital oxygen has recently been administered to tubercular patients, and the results thus far have been somewhat extraordinary. The immediate effect of the inhalation of the gas is a marked improvement in the appetite and increase in weight of body. The gain in weight in some of the patients has been almost marvellous. We shall endeavor to present further and fuller accounts of this plan of treatment. Dr. Smith, to whom we are largely indebted for the utilizing and making known the administration of oxygen, has also used it in these cases, and with decided success. We hope to hear further from him in this matter, to which he has paid special attention.

Fatal Poisoning from Carbolic Acid.—The *Lancet* of March 20th reports another fatal accident from the internal administration of this remedy. The patient took about one ounce and a half of the impure acid used for disinfecting purposes, supposing the same to be a solution of salts and senna. The reporter of the case, Mr. Edward Swain, remarks:

There are several points of interest in connection with this case:

First, the rapid manner in which death was produced—viz., in about an hour. This I attribute to the injury to her system produced by her previous habits of intoxication, and by the extensive brain-lesion found, rendering her unable to resist the shock produced by so powerful an irritant.

Second, the detection, by the smell, of the carbolic acid in almost all the internal organs, especially the liver, spleen, and kidneys. And in this way I think a poisonous dose might at any time be detected when administered feloniously.

Third, the rapid manner in which it had made its way through the small intestines. Probably it had caused paralysis, and therefore dilatation of the pylorus, as the intestine was *full* of the brownish-red fluid.

Fourth, it was very noteworthy that no decomposition had occurred where the carbolic acid was; but below the point of contact cadaveric decomposition had commenced, and was distinctly visible, contrasting strongly with the parts penetrated by the acid.

Fifth, the green stain in the stomach gave me at first the impression that it was produced by bile; but, by its peculiar form, I became convinced that it was caused by carbolic acid, together with the chemical reasons stated below. In the British Pharmacopœia, 1867, it states: "a slip of deal dipped into it, and afterward into hydrochloric acid, and then allowed to dry in the air, acquires a greenish-blue color." Thus, after death, the carbolic acid having by its greater specific gravity (1.065) fallen through the other liquid, it came in contact with the stomach and its secretions, of which hydrochloric acid probably forms a portion, and so the green stain may have been formed (?).

THE recent graduation of so many medical students from our various colleges gives a point to the following remarks by the *Medical Mirror* of London:

The profession of medicine in the United States is suffering most acutely from a perfect deluge of licensing medical bodies, which are manufacturing to the utmost of their bent full-blown medical men.

The American Medical Association intends to take this matter into its serious consideration.

It is, doubtless, difficult to steer clear between the Scylla of infringing the liberty of the subject, of licensing bodies, on the one hand, and the Charybdis of a profession swamped by men possessed of the extreme minimum of medical knowledge, on the other.

The remedy is easy, and it is one that before long must be applied to our English licensing institutions.

The American Medical Council, supposing such a council to exist, must reëxamine all candidates possessed of the degrees of the various licensing bodies, and then ratify or annul the diplomas of the candidates.

The English Medical Council must, to protect the profession from the "competition downward" of our various licensing bodies, also institute a Central Board of Examiners, to inquire into the diplomas and the actual knowledge, general and medical, of the individuals presenting themselves for registration.

In America the competition between licensing bodies is on a gigantic scale. When two or three doctors happen to be gathered together, it is perfectly competent for them, not merely to found a teaching institution, but it is permitted to them to grant licenses for practice, as the various State local governments permit the freest exercise of any and every medical doctrine, whether eclectic, hydropathic, or homœopathic.

The United States' medical profession stands a chance of having as many licensing medical and surgical bodies as we have hospitals and dispensaries. The multiplication of teaching bodies cannot be considered an evil, for every general practitioner ought to be competent to educate his successor, but the indiscriminate multiplication of diploma-giving bodies is quite another question. The innumerable teachers spread knowledge broadcast, but there should be one central portal of very high standard established, not permitted to teach at all, but simply formed to examine any and all candidates of a proper age who might present themselves before it.

In England we have fewer licensing bodies, and, therefore, the competition downward, although severe, is not nearly so ruinous to the scientific *status* of the profession as in the newer country.

In England we have long sought the one portal system as regards the granting of professional diplomas, and although, as regards medical practice, the United States' doctors may be considered to be more advanced than the jog-trot practitioners of Britain, yet, in the matter of reforming the tendency to a lowering of the diploma examinations, the shrewd business talent of the English profession will not be found wanting.

CRIMINAL POISONING.—M. Chevalier furnishes a table indicating the various substances which have been employed for the purpose of poisoning in the cases which have led to criminal proceedings in France during the ten years 1855–'65. The total number of cases is 494, and the following is the list of the respective articles employed, twenty-nine in number: Arsenic, 135 times; phosphorus, 180; verdigris, 15; sulphuric acid, 22; sulphate of copper, 83; nux vomica, 1; mercurial ointment, 1; cantharides, 10; glass in powder, 2; sulphate of iron, 3; colchicum, 1; Fiorabenti balsam, 1; hellebore, 6; tartar emetic, 2; laudanum, 6; carbonic acid, 1; *eau sédative*, 2; ammonia, 3; hydrochloric acid, 4; strychnia, 5; syrup of poppies, 1; mercury, 2; morphia, 1; potash, 1; digitaline, 2; nicotine, 1; prussic acid, 1; croton-oil, 1; antimony, 1; total, 494.—*Chimie Méd.*, January.

VESICAL ABSORPTION.—A correspondent of the *British Medical Journal*, in a communication to that paper, remarks:

"That the bladder is able, under special circumstances, to absorb the water from the urine contained in it, I have no doubt, from an observation made in my own person. Some years ago, I started one morning for a walk of many miles along the sea-coast, and when near my destination I was about to stop to pass urine, when I discovered to my consternation that my progress farther was arrested by the jutting rocks. My attention was immediately diverted to my novel position, and for some time I was engaged in various schemes for my extrication. As none were feasible, I was forced to remain an exile on the shore until the morrow allowed me to retrace my steps. It was near midnight when I suddenly recollected that I had been arrested almost in the act of micturition, and I thereupon emptied my bladder, but it was more from the idea of fulfilling a forgotten engagement than from necessity. My surprise was then great when I remarked that the quantity of urine was small, as I was sure, from my own feelings, that the bladder had some hours before been full. The physiological fact of absorption of the urine, or, at least, of its aqueous portion, forced itself upon my conviction, and I have not the slightest doubt that this did take place. I should state that, having no food, my hunger was great and my thirst painfully distressing; now, if the sense of thirst be due to the want of water in the system, its requirements were considerable in my case. Of course, I cannot prove to demonstration what amount of urine my bladder held at three o'clock, and what amount at eleven, but I know that the quantity was small at the latter time, and at the former my desire to micturate was as usual after having had no relief since the early morning. I believe, also, that I was the subject of another interesting physiological experiment: that my thirst was subsequently much alleviated by absorption of water from my wet clothes."

The editor of the *Journal*, commenting on this statement, says:

"This subject is of much therapeutical as well as clinical interest, and especially in relation to morphia injections into the bladder in cystitis. Very different conclusions have been published as to the therapeutical effect of these injections. Dr. Braxton Hicks has found them useful; Sir Henry Thompson, useless. In a *résumé* in the *Gazette des Hôpitaux*, March 7, 1868, M. Segalas is described as admitting the absorption, as proved by experiments on animals; M. Demarquay, as finding it very feeble; MM. Russ and Susini, as denying it altogether, from experiments on healthy men. M. Edward Alling reports, in the *Bulletin Général de Thérapeutique*, six cases in which morphia injections, given in rebellious and severe cases, afforded great relief. Like Dr. Hicks, who has found them useful, he recommends full doses of the morphia; and he dissolves the salt in even a smaller quantity of water — thirty to forty drops of a solution, of which each drop contains two *milligrammes* of the salt.

RESULTS OF TRANSFUSION.—Professor Landois, of the University of Greifswald, who has interested himself much in the subject of transfusion, after giving a critical account of the most recent publications on the subject, thus sums up, in a recent number of the *Wien. Med. Woch.*, the results that have hitherto been obtained: 1. Transfusion has been performed ninety-nine times in cases of hæmorrhage, in eleven of which cases no successful result was even possible. Of the remaining eighty-eight cases, sixty-five were attended with success, twenty were unsuccessful, and in three the result was doubtful. 2. It has been performed twelve times in cases of acute poisoning, one of these being hopeless. In three the results were favorable, and in eight unfavorable. 3. For various forms of disease attended with exhaustion, it has been resorted to forty-three times, the most unfavorable prognosis having been frequently delivered. In these the results were favorable in twelve, unfavorable in twenty-one, and doubtful in nine, while in one case it was a mere desperate experiment. Professor Landois observes that these statistics speak very satisfactorily for transfusion, and that the results would be far more favorable if this almost harmless operation were not usually driven off to the last minute.—*Medical Times and Gazette.*

NEW YORK

MEDICAL JOURNAL:

A MONTHLY RECORD OF

MEDICINE AND THE COLLATERAL SCIENCES.

VOL. IX.] JUNE, 1869. [NO. 3.

Original Communications.

ART. I.—*An Essay on Acupressure,*[1] *with some Reference to its Application in the Continuity of Arteries.* By GEO. A. PETERS, M. D., New York, Attending Surgeon New York Hospital.

HÆMORRHAGE, with its attendant dangers, was held in such dread by surgeons until a comparatively modern date, that they hesitated long before performing amputation or any important operation, which by the division of large arteries should induce it. Waiting the time when the process of gangrene and sloughing had obliterated the vessels, they merely lopped off the dead tissue, and left the wound to Nature or to the rude dressings of the day. If others, bolder than their fellows, dared to cut before this time, their chief reliance for checking the flow of blood was upon glowing steel and boiling pitch.

When, three hundred years ago, Ambroise Paré, as he claimed, under the inspiration of the Deity, employed and urged upon the attention of the profession the use of the ligature, before but hinted at as it were, he conferred a great boon upon suffering humanity, and robbed surgery of half its terrors to the surgeon. It remained for an American, in the nineteenth century, by the introduction of the inhalation of anæsthetic vapors, thereby obliterating all sensibility to pain, to repay the debt which our day owed to the past—to make formidable operations pleasant to the surgeon, painless to the patient, and more certain in their results.

---

[1] This paper was read before the Medical Society of the County of New York, April 5, 1869.

From the time of Paré, the ligature continued to grow in favor, and soon became the sole reliance in stopping the flow of blood after amputation and all major operations. The profession seemed to have settled down in the belief that, notwithstanding its few but obvious evils, there was, and probably would be, no better means devised. However, Sir James Y. Simpson—believing that, "as a practical science, surgery must ever march forward, it can acknowledge no boundaries to its onward progress and development, and knows no finality"—first described to the Royal Society of Edinburgh, at their meeting on the 19th December, 1859, "acupressure as a new hæmostatic process, founded on the principle of the temporary metallic compression of arteries." The proposition was kindly received by the profession, and the method tried by surgeons in various parts of the world. Professor Simpson himself gave the matter no further consideration, as "the subject lay somewhat without the ordinary walks of his study and practice," until December, 1863, when he published in the *London Medical Times* one or two lectures on acupressure, which have since been enlarged and have appeared in book form. From time to time, cases, in which acupressure has been used, have been reported in the various medical journals, and remarks made thereon.

Next to Professor Simpson's book, the most complete and satisfactory *résumé* is the joint work on Acupressure by Drs. Pirrie and Keith, two surgeons of Aberdeen, Scotland, who have recorded a large number of cases, instituted valuable improvements in the methods of its application, and given many hints in its practice.

The essay prepared by Dr. Joseph C. Hutchison, of

Brooklyn, L. I., entitled "A Practical Treatise on Acupressure," and read before the Medical Society of the State of New York at their meeting in 1869, to which the "Cash prize" was awarded, is by far the most complete and laborious record of Acupressure made in this country. By the kindness of Dr. Hutchison, I am permitted to avail myself of the results of his experiments on the lower animals, and various other matters connected with the subject.

Before proceeding to discuss the various methods by which hæmorrhage from bleeding vessels is checked, it will be well to allude briefly to the anatomical construction of an arterial tube. The walls of arteries are divisible into three coats: The inner one, thin, transparent, and smooth, resembling somewhat a serous membrane. The middle coat, the thickest of the three, is divided into two layers—the outer of the two is yellow elastic tissue, the inner layer is composed of organic muscular fibre, arranged circularly; these circular fibres are loosely bound together by connective tissue, and give way easily to a slight degree of force exerted in the circumference of the artery. The outer coat is white, dense, and very elastic, not readily yielding to force. Arteries are themselves supplied with arteries, veins, nerves, and absorbents, and are thus enabled to undergo any change to which other living tissues are subject, and can inflame and repair.

Let us now briefly consider the means which Nature employs for the suppression of hæmorrhage from divided arteries.

Dr. J. F. D. Jones, an English surgeon, instituted a series of experiments on the lower animals to determine the manner in which hæmorrhage was checked by Nature and by the ligature. The result of these experiments was first made public in a volume published in London in the year 1805, which established these facts, viz.: When an artery is divided, we have, first, a spirt of blood; then quickly following this a retraction of the artery within its sheath, and a contraction of its extremity. As the connective tissue between the vessel and its sheath is very loose, it is readily stretched and torn, leaving the internal surface of the sheath uneven; the blood becomes entangled as it flows, and "thus the foundation is laid for the formation of a coagulum at the mouth of the artery, and which appears to be completed by the blood, as it passes through this canal of the sheath, gradually adhering and coagulating around its internal surface till it completely fills it up from the circumference to the centre." This forms the external coagulum, and it is the first complete obstacle to the continuation of bleeding.

The blood just within the mouth of the artery is now at rest, and, if there be no collateral branch given off very near it, a slender conical coagulum is formed, attached only by the circumference of its base, near the cut extremity of the vessel. This is called by Dr. Jones the internal coagulum.

The artery, being itself highly organized, "inflames at its cut end, and by the usual processes of repair the effused fibrin between the internal and external coagula adheres to them, and is firmly united to the internal coat of the vessel." There is also a gradual contraction at the end of the artery, and an effusion of fibrin between the tunics of the artery and into the surrounding tissues, causing them to become thickened and intimately incorporated with each other.

As it is not within the scope of this paper to discuss all the surgical means used for the suppression of hæmorrhage, but rather to contrast the three methods by *ligature*, *acupressure*, and *torsion*, I shall but name the tourniquet, the roller and compress, the cautery, caustics, and styptics, and pass on to

THE OPERATION OF THE LIGATURE WHEN APPLIED TO ARTERIES.

When an artery is properly tied, the effect of the ligature is to press together the parietes of the vessel, and after they touch, if the ligature is further tightened, the internal and middle coats are cleanly and regularly cut through; while the external coat, from its peculiar structure, resists the action of the ligature, and becomes interposed between the upper and lower margins of the wound in the other coats of the artery, the two divided ones retracting, their wounded margins coming in close contact.

A coagulum of blood forms within the artery, if there be no collateral branch near the point of ligature. Although the nearness of a collateral branch always prevents the formation of a coagulum, it does not always prevent the completion of the adhesive process.

This pressure by the ligature, sufficient to close the calibre of the vessel, does not interrupt the vital properties of the two divided coats, and by inflammatory action their two edges adhere and the canal is closed. Inflammation is likewise produced on the corresponding external surface of the artery, by which it becomes thickened. The surrounding soft parts also become inflamed, thickened, and agglutinated.

In the mean time, the vitality of the outer coat being destroyed at its constricted portion, the ligature causes ulceration, which after a time detaches it and allows it to come away; after which the small sinus heals and the process is complete, the artery being obliterated and converted into a fibro-cellular cord to the collateral branches on both sides of the part which has been tied.

TORSION.

The fact that after extensive wounds, where arteries were drawn out and torn across by violence, there was no considerable hæmorrhage from these vessels, led surgeons to imitate this method after operations.

Torsion was probably first practised by Galen. Several French surgeons, about the year 1829, after experimenting upon the inferior animals, tried it upon the larger vessels in the human subject after amputations and other operations of magnitude.

Baron Dupuytren tested the plan at the Hôtel Dieu, and arrived at the conclusion "that torsion may be safely applied to arteries of small calibre, but that it is imprudent to trust to it where they are of large size." After this verdict from an authority so high, the practice seems to have fallen very much into disuse.

There are three methods of performing torsion:

First method, is to seize the end of the bleeding vessel between the blades of a pair of forceps, and draw it out a short distance; then by rotating the forceps, the extremity of the artery is twisted several turns upon itself.

The objection to this method is, that by drawing out the vessel its vital attachments to surrounding tissues are destroyed, and inflammation and death of the part so treated results; which inflammatory process may involve the artery beyond, and serious trouble result.

Second Method.—Take hold of the end of the artery with a pair of forceps, draw it out gently for a short distance, then seizing it with a second pair near its point of emergence from the soft tissues, you fix it; after which, by rotating the first pair of forceps three or four times, the artery between the two pairs is twisted, and the bleeding ceases. Both of these methods tear, to a greater or less extent, the internal and middle coats of the vessel, thus producing adhesive inflammation and permanent closure, in much the same way as the ligature.

Third Method.—In practising this method, the point of the artery should alone be seized and strongly twisted until the portion included between the blades of the foreceps comes away.

This method is now much used by Professor Syme and other Edinburgh surgeons, who seem to be somewhat loath to yield allegiance to acupressure.

ACUPRESSURE.

For the practice of acupressure in its various methods, the following appliances are required:

Pins, varying in length from three to six inches, with solid heads or heads of glass.

Needles, also of various lengths, threaded with fine annealed iron wire, and a loop of fine annealed iron wire about six inches long. Bayonet-pointed pins and needles are less likely to cut the tissues and are more easily introduced; although in the deeper tissues, where the skin is not involved, the ordinary sewing-needle will answer very well. After the needle is threaded, the wire should be doubled and twisted upon itself through its entire length, for, if it be doubled only for the distance of an inch or so from the eye, in withdrawing it the short terminal point is apt to become entangled in the surrounding tissues and give pain to the patient. Pure silver wire, or the purest pliant copper wire—gold electro-plated—may be used, although decidedly less easily manipulated than the iron. The pins and needles may also be electro-plated, and should be sufficiently strong and well tempered not to bend in the using.

A reference to the accompanying woodcuts will make clear the following description of the various methods of applying acupressure.

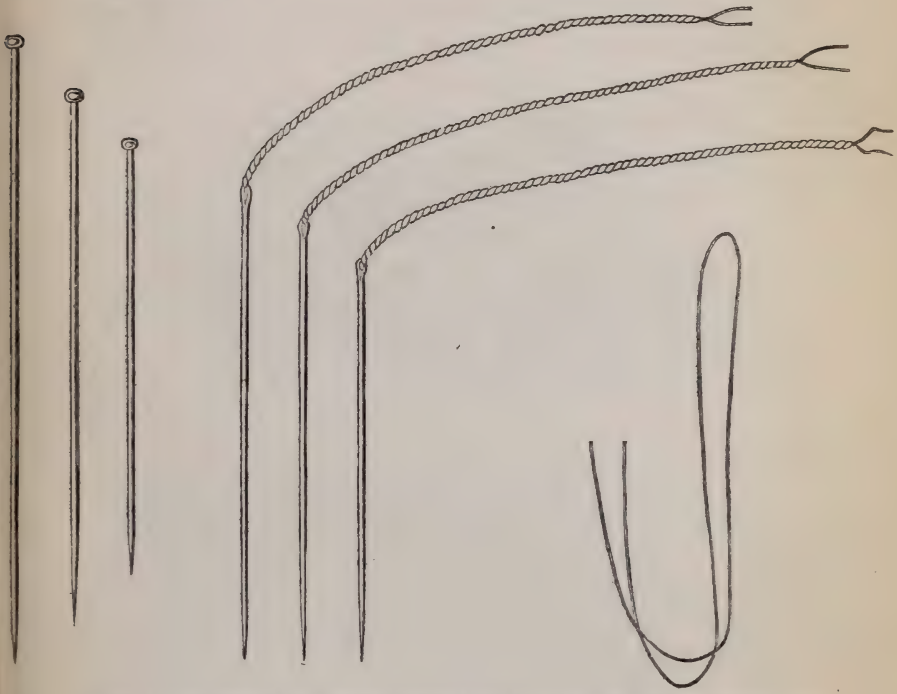


FIG. 1.—Acupressure pins, needles, threaded with iron wire, and loop of annealed iron wire.[1]

First Method, as described by Professor Simpson, "consists in passing a needle through the flaps or sides of the wound, so as to cross over and compress the mouth of the bleeding artery or its tube, just in the same way as, in fastening a flower in the lapelle of our coat, we cross over and compress the stalk of it with the pin which fixes it, and with this view push the pin twice through the lapelle." If the pin crosses the artery just at its bleeding mouth, a small extent of its middle portion is exposed; but, if desirable, this may be avoided by concealing the pin entirely in the tissue and compressing the tube of the vessel a few lines back from its mouth. The head and point of the pin are exposed upon the cutaneous surface of the flap. To perform this method, seize the flap between the forefinger and thumb of the left hand, the thumb covering the open mouth of the vessel; in this way the artery can be felt pulsating between the finger and thumb.

---

[1] The cuts in this paper are from Pirrie and Keith's work on Accupressure.

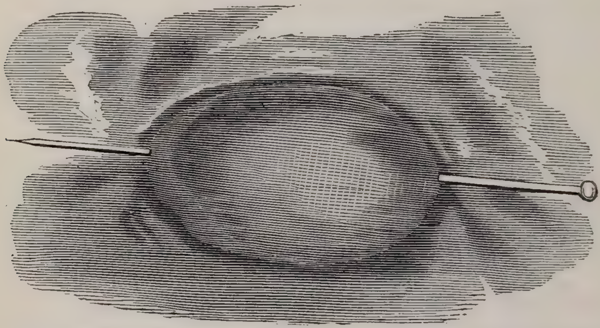


FIG. 2.—The cutaneous surface of flap, with artery secured by acupressure pin according to first method.

Holding the pin in the right hand, thrust it from the cutaneous surface entirely through the thickness of the flap, causing its point to emerge a short distance from the side of the artery. Then by forcibly inclining the head of the pin away from the artery it causes the point to press upon the vessel with sufficient firmness to close its calibre—now carry the point on into

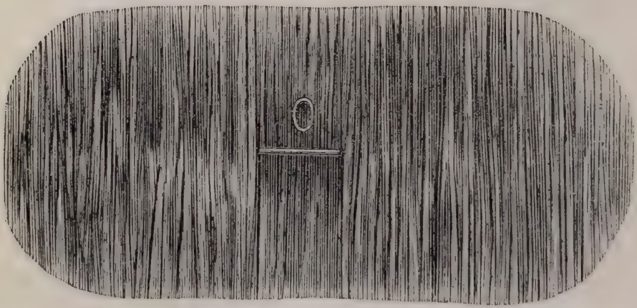


FIG. 3.—Wound surface of the same flap, showing the pin compressing the artery.

the tissues a short distance beyond, and thrust it out again through the cutaneous surface. Thus the artery is compressed between the middle portion of the needle and the soft parts of the flap. For this proceeding, one of the longest pins will be needed, if the flaps are of any considerable thickness.

Second Method.—For this method, select a needle of the proper size, armed with a fine annealed iron wire to facilitate its removal; thrust it into the fresh surface of the wound at a short distance from the bleeding vessel, pass it on and cause its point to emerge as near the vessel as possible without transfixing it; then on again over the vessel, completely compressing it; then dip the point once more into the fresh surface close to the vessel on the opposite side; continue to force it on, causing the point of the needle to emerge a second time upon the cut surface. This bridges over the artery and completely occludes it. The degree of pressure exerted is slight, but sufficient to stop the bleeding in the smaller vessels. There are other methods, shortly to be described, which are preferable. A pin may be used if the bleeding point to be secured lie sufficiently near to allow the head of the pin to be brought outside of the lips of the wound.

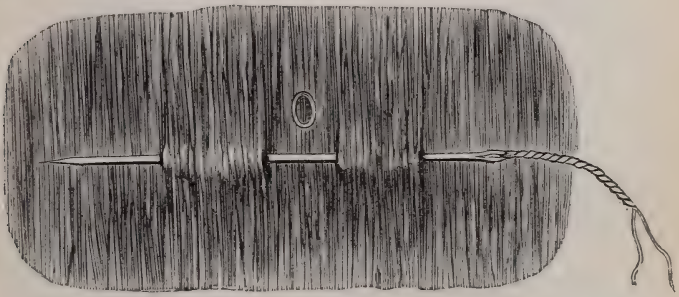


FIG. 4.—The needle threaded to admit of its being withdrawn. Second method.

Third Method.—A needle, threaded with a twisted annealed iron wire, is thrust into the soft parts on one side of the artery, carried on behind it, and then the point is made to emerge upon the opposite side of the vessel. Pass a loop of wire over the point of the needle—bring the wire back over the track of the artery and behind the eye-end; draw upon the wire with sufficient force to close the vessel, and then fix it by a half-twist around the shank of the needle.

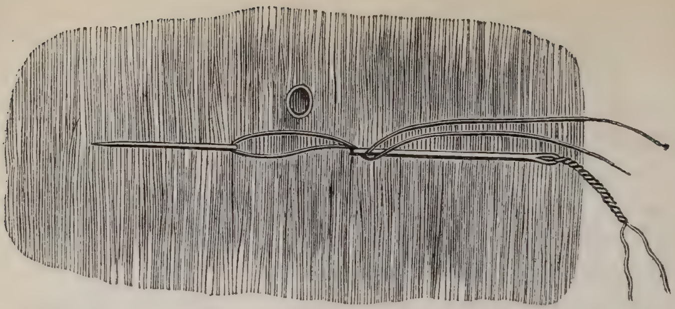


Fig. 5.—The third method, by means of a needle threaded with iron wire, and a loop of annealed iron wire.

Fourth Method.—This is merely a modification of the third; a pin being substituted for the threaded needle. When the vessel to be secured is so situated that the head of the pin can be left external to the lips of the wound, without any undue straining of the parts, the fourth method can be performed more easily than the third, and both the wire and the pin can be removed with greater facility than where the threaded needle is used.

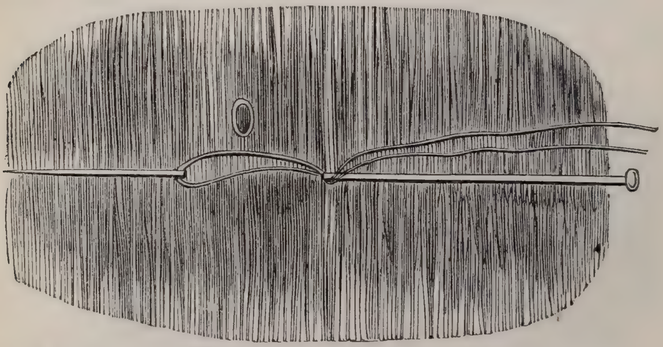


Fig. 6.—The fourth method, by means of a long pin and a loop of iron wire.

By the *third* and *fourth* methods, the tube of the artery is compressed between the pin below and the wire above, and no more force should be used in tightening the wire than just sufficient to stop the bleeding. It will also be found in practice that a simple half turn around the needle is sufficient to fix it securely.

The first, second, third, and fourth methods were devised and first described by Prof. Simpson. The third and fourth methods are very reliable even for the larger vessels, and have a wide range in their application.

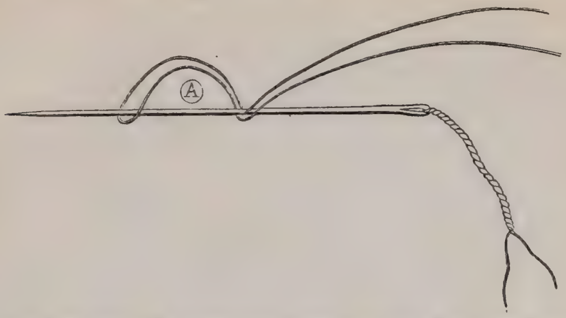


FIG. 7.—The mechanism of the *third* and *fourth* methods, viz., direct compression of the artery between the loop and the needle or pin. Third and fourth methods.

Fifth Method, or the Aberdeen Twist.—There are two varieties of this method, "differing from each other only in the extent of rotation given to the instrument by which the twist is effected." An armed needle or a long pin is the only instrument required in either variety.

In the *first variety of the Aberdeen method* the instrument it made to undergo a half rotation. Enter the instrument a few lines to one side of the bleeding artery, pass behind it, and then make the point to emerge a few lines on the other side of the vessel. This terminates the first stage. In the words of Prof. Pirrie, "the second step consists in twisting the needle or the pin to the extent of half a rotation, so as to bring its head to the side where its point was situated before

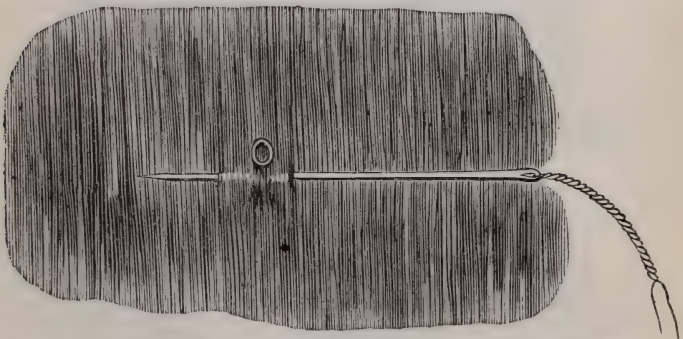


FIG. 8.—The appearance of the parts, at the termination of the *first step* of the *fifth or Aberdeen* method with a threaded needle.

making the twist; the instrument being now above, instead of below the artery, and well pressed down upon it. The third step consists in sending the point of the instrument into the tissues beyond the artery, for the purpose of securing it in the proper position and retaining the twist."

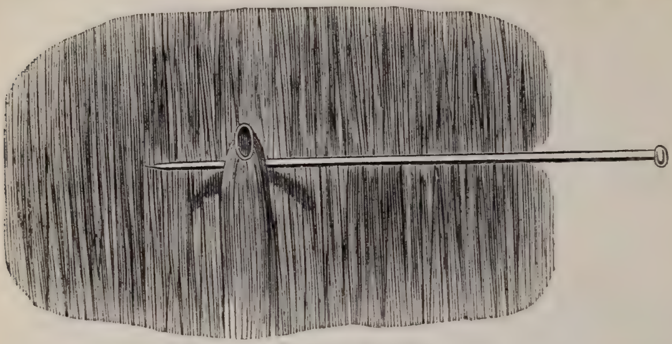


FIG. 9.—The same with a pin.

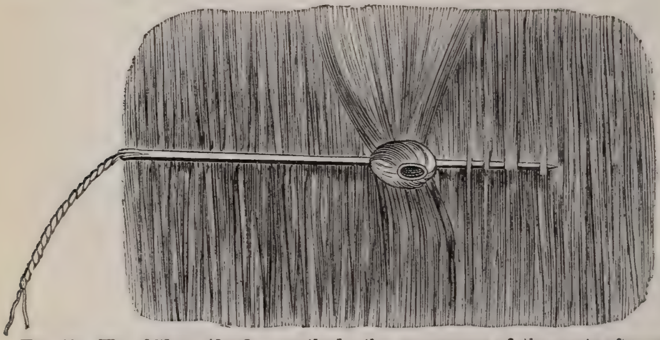


FIG. 10.—The *fifth or Aberdeen* method; the appearance of the parts after making the *half rotation* and fixing the needle.

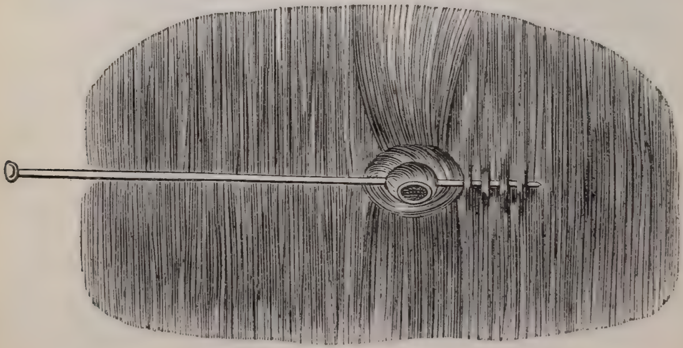


FIG. 11.—Same, with the pin.

Second Variety of the Aberdeen Method.—This is preferable to the first variety, being more simple, requiring only a quarter instead of a half rotation of the instrument used. This variety also should be considered as divided into three steps.

In the first step, the needle or pin is thrust into the tissues on one side of the vessel to be secured, pressed onward a short distance parallel with the course of the artery, and its point made to appear in the wound.

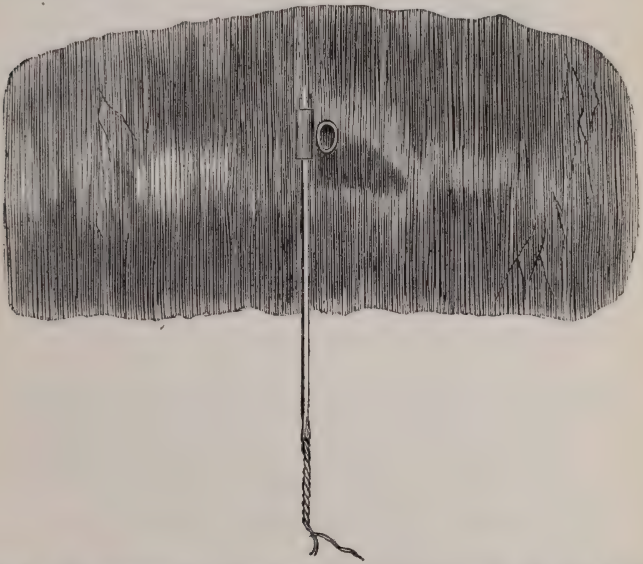


FIG. 12.—The appearance of the parts, at the termination of the *first step* of the *fifth or Aberdeen method*, by the twist, before making the *quarter rotation* with the needle.

The second step consists in giving "a quarter rotation to the instrument, which places it above the artery and well pressed down against the small portion of tissues between the instrument and the vessel," and enables the operator to complete

The third step, by driving the point of the pin into the tissues beyond the artery, thereby securing both the pin and the twist.

One using either of these methods for the first time will be struck with the slight degree of pressure required to stop the bleeding, which is all the surgeon need attempt to do.

These methods by the twist are performed with great facility, and give, perhaps, more satisfactory results than any of the others, from the fact that a minimum amount of injury is inflicted on the soft parts, and the pins or needles can be withdrawn with very little pain to the patient.

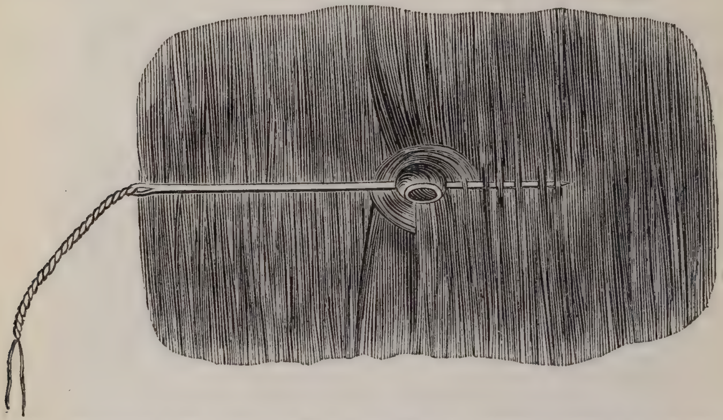


FIG. 13.—Showing the appearance of the parts, after the *quarter rotation* of the needle, and the ultimate insertion of its point into the tissues beyond the artery.

This method was used in one case by Prof. Simpson in 1860. In 1864, Dr. Knowles, at that time in the Aberdeen Hospital, suggested this mode, being ignorant of the fact that it had been devised by Prof. Simpson; and Prof. Pirrie applied it for the first time successfully to the femoral artery, after amputation of the thigh.

One essential point in the Aberdeen method by the twist is, that the artery should not be transfixed, a procedure which has been recommended and practised, and which I shall explain at a subsequent time.

Sixth Method.—This was devised by Dr. Keith, of Aberdeen. It requires for its performance a pin and a loop of fine annealed iron wire.

Enter the pin a few lines from the artery, cause it to pass below it, and then push it on so that its point will emerge a few lines beyond the mouth of the vessel, taking care not to transfix the artery.

Now throw the loop of wire over the point of the pin and cross the two ends behind its stem, and draw upon the wire with sufficient force to compress the bleeding vessel between *one side of the loop* in front and the pin behind; the ends are then "brought forward and finally fixed by a half twist in front of, and close down upon, the pin."

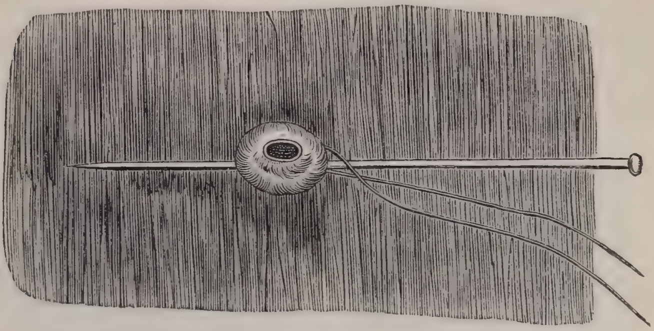


FIG. 14.—The sixth method, by means of a pin and loop of iron wire.

If more force is used in drawing upon the wire than simply sufficient to stop the bleeding, the mechanism of this method is changed, and the artery, instead of being compressed between one side of the loop and the needle, is caught in the loop of the wire, and the *rationale* of its operation in this case is precisely that of the ligature; and, if the force be continued, the internal and middle coats are divided, and it is not acupressure at all.

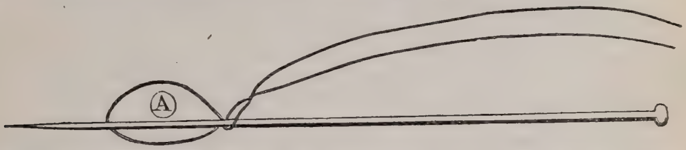


FIG. 15.—Skeleton diagram, showing the arrangement of the wire in the sixth method.

Dr. Pirrie claims that, "for securing a vessel on a perpendicular wound, the sixth will sometimes be found a convenient method, in circumstances where the performance of the third or fourth would be attended with difficulty."

Seventh Method.—For the performance of this method, a long pin is the only instrument required. Pass the pin from without inward; in the words of Prof. Pirrie, "through the skin, pretty deep into the soft parts, at some distance from the vessel to be secured, making it emerge near the vessel, bridging over and compressing the artery, dipping the pin into the soft parts on the opposite side of the vessel, and bringing out the point of the pin a second time through the common integument. The soft parts are twice transfixed, and the artery is compressed between the bone and the middle portion of the needle, in front of the integument, between the first point of exit and the second point of entrance. Three portions of the needle are left without the integument; namely, its central portion and its extremities."

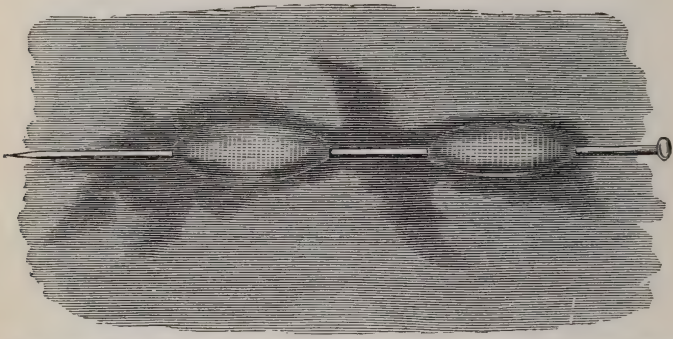


FIG. 16.—The position of the pin in the seventh method. The middle portion of the pin, in front of the integument, bridges over the artery to be acupressed, and the compression is effected between the middle portion of the pin in front and the bone behind.

I have described above the seven methods of acupressure devised by Profs. Simpson and Pirrie, and by Drs. Keith and Fiddes, and extensively used in both hemispheres. These methods are simple, easily understood, and are sufficient to meet all cases where "this more excellent way of suppressing hæmorrhage" is admissible.

Various modifications or combinations of these methods may be contrived; but the principle must ever remain the same; namely, *temporary metallic compression, of force sufficient simply to close the calibre of the artery, without lacerating any of its coats.*

The subject of acupressure has of late attracted considerable attention in the New York Hospital, and Dr. Gurdon Buck, one of my colleagues in that institution, has devised a method for its performance which he desires should be called the New York twist, and which I shall here describe as the

Eighth Method, or New York Twist.—For its performance a pair of thumb forceps and a pin or threaded needle are required.

The first step consists in seizing the mouth of the bleeding vessel between the blades of the forceps and rotating the extremity of the artery at least twice on its own axis.

The second step requires that the needle should now be thrust entirely through the twisted artery, near the forceps, and pressed on into the tissues beyond, thus securing both the artery and the needle.

The objection to this method which strikes me is, that it may with truth be said to violate the great principle of acupressure, which is, that we should carefully avoid any violence to the artery itself, whereas by this method the vessel is treated as in torsion, and receives in some degree the same damage as by that procedure. It has been practised, however, by Dr. Buck, and, with some unimportant modifications, by other surgeons, with good results.

It is important that we should endeavor to simplify rather than complicate or multiply the methods.

Dr. Joseph C. Hutchison has contrived a modification of the *third method* which is well adapted for application in the continuity of vessels, and which he used in all his experiments on the lower animals, to which I shall have occasion hereafter to refer.

In his hands it proved to be easy of application and removal, and efficient in accomplishing the purpose for which it was intended. This method I propose to describe in his own words: "The artery is first exposed by the usual incisions: a loop of wire about eight inches long is laid in the wound parallel with, and on the side of the vessel next the head-end of the pin; the pin is now carried through the flap, from its cutaneous surface, half an inch more or less (according to the depth of the vessel), back from the edge of the incision—say to bring it down to the level or plane of the artery, and then over the wire and beneath the vessel, without disturbing its vital and organic relations, with the nerve, vein, or its sheath.

"When the pin has emerged from beneath the artery, the wire noose is thrown over the point-end, which is then carried through the opposite flap at a point corresponding to that at which it entered. The wire-loop is next brought over the track of the vessel, which is now compressed between the pin *below* and the wire *above;* and lastly, the wire is fixed by a half turn around the pin. The removal of the pin, when the proper time arrives, liberates the loop, which can then be easily withdrawn."

My attention was called, soon after its publication, to the first account of the subject of Acupressure in the *Edinburgh Medical Journal*, for January, 1860, and I determined to give it an early trial. A case presenting itself at St. Luke's Hospital, I applied the pins on the 6th of March, 1860.

This I believe to have been the first trial of acupressure made in this city, if not in this country. The case, which is recorded in the *New York Journal of Medicine* for May, 1860, page 424, is as follows:

CASE I.—*Excision of Mamma; Acupressure by the First Method.*

Jane Pierson, England, aged 33, was admitted into St. Luke's Hospital, with cancer of the breast.

On the 6th of March, 1860, I removed the mamma by the usual incisions, which were prolonged into the axilla for the removal of a mass of glands in that region, which were contaminated. Three long pins were applied by the first method, and the bleeding ceased. No ligatures used. The flaps were accurately coaptated, and union by primary adhesion followed throughout its entire length, except a small opening in the axilla for the egress of pus consequent upon the thorough removal of the glands. The needles were withdrawn three days subsequent to the operation. No trouble ensued, and the patient had a complete and rapid recovery.

The needles in this case were left in much longer than necessary, as the method was tried by me for the first time, and I hesitated to trust to an earlier removal. Acupressure was used soon after in the New York Hospital by Drs. William H. Van Buren and T. M. Markoe.

CASE II.—*Amputation of Forearm; Acupressure by the First Method.*

Hugh Robinson, aged 23, admitted to New York Hospital March 17, 1860, with compound fracture of metacarpus. Case was attended with sloughing, etc., and amputation of forearm was performed by Dr. Wm. H. Van Buren, April 26, 1860. Three common Berlin pins were used. One each, by the first method, for the radial and ulnar arteries. The third needle "pierced through directly the interosseous space, compressing the vessel to the outer border of the radius." Wound was closed by silver sutures, and cold-water dressings applied. Needles were removed *forty-eight hours* after the operation. Union by primary adhesion "throughout deeper portion of the stump, and but a slight linear ulceration being visible at its periphery." Patient discharged, cured, May 19, 1860.

CASE III.—*Amputation of Leg; Acupressure by the First Method.*

William B. Strachan, aged 35, admitted to New York Hospital, April 22, 1860. Amputation was performed by Dr. Markoe, May 29, 1860, "a hand's-breadth below the tubercle of the tibia." Five needles were introduced for the anterior and posterior tibials, two surals and one circumflex artery. Three muscular branches were also strongly twisted, controlling all hæmorrhage; stump sutured with silver wire, and cold-water dressings applied. Needles were withdrawn *seventy-two hours* after the operation, "leaving five suppurating tracks."

June 6th.—"Stump has united throughout its anterior half by first intention" (primary adhesion?). "Moderate discharge from lower portion."

June 23d.—"No suppuration from needle-tracks, and but slight discharge from stump." Suppuration within the knee-joint afterward set in, extending up the thigh, and patient died July 30, 1860.

Autopsy showed abscess above and below knee-joint, communicating with it. No collection of pus in lungs, liver, or kidneys. Heart healthy. Head not examined.

In this case, the needles were left in much too long a time, thus accounting for the suppurating tracks remaining after their withdrawal.

From this time until December, 1868, a period of over eight years, the carefully-kept records of the New York Hospital show no case in which acupressure was resorted to. Why this is so, it is difficult to say, except that, owing to the few methods of its application then in vogue, and the fact that new measures are accepted with hesitation, we declined to forsake an old and tried friend for a new one. So much, however, has in the mean time been said and written upon the subject, and its methods so enlarged and improved, that our attention has again been challenged.

CASE IV.—*Amputation of Arm; Acupressure by the Third Method and the "Aberdeen Twist."*

Peter Bobalinger, aged fifty, admitted to New York Hospital, December 21, 1868, with compound fracture of radius and ulna, and extensive laceration of soft parts. Amputation in the upper third of the arm was performed, four and a half hours after the injury, by Dr. Krackowizer, by circular method. The brachial artery was secured with a needle and loop of silver wire by the third method. A second bleeding vessel was secured by the fifth method. The needles used were the ordinary glover's needle. Wound closed with silken sutures and cold-water dressings.

The needles were withdrawn *forty-eight hours* after the operation, with the aid of Dr. Gurdon Buck's instrument. There was no primary union. The stump healed by second intention, and patient was discharged, cured, February 16, 1869.

In this case nothing, I think, was gained by substituting acupressure for the ligature. There was no attempt even at union by first intention, which was due in all probability to the nature and extent of the original injury. Where such must be the almost inevitable result, I should claim no advantage in the use of the needles.

Allusion is made above to an instrument contrived by Dr. Buck, to facilitate the removal of the armed needle from the wound. It consists of a thin steel rod about three inches in length, provided at one end with a handle, and at the other with a small immovable steel ring; both the handle and ring stand off at right angles to the shaft of the instrument. The wire attached to the needle is passed through the ring, the instrument is then carried down through the lips of the wound, along the wire as a guide, to the eye-end of the needle. The instrument is then pressed firmly down in its place, and the needle and wire withdrawn.

If, after the introduction of the armed needle in acupressure, care be taken, before closing the wound, to carry out the wire in a straight line with the needle, and also to avoid all kinking, when you desire to withdraw it, no helping instrument will be needed—only draw carefully upon the wire, and the needle will readily follow.

CASE V.—*Amputation at Knee-joint; Acupressure by Eighth Method, and the "Aberdeen Twist."*

Edward Powers, aged forty, admitted into New York Hospital, December 31, 1868, with compound fracture of the leg, occurring the evening before admission. Amputation at the knee-joint was performed by the house surgeon, Dr. John A. Beekman, under the direction of the attending surgeon, twenty-one hours after the injury. The popliteal artery was secured by the "New York twist," one other vessel was secured by the "Aberdeen twist." The wires, which were of silver, were brought out at the angle of the wound, and the flaps closed with silken sutures. The needle securing the smaller vessel was removed *forty-eight hours* after the operation, by the help of Dr. Buck's instrument, with great ease. In attempting to withdraw the needle from the popliteal artery, with the aid of Dr. Buck's guide, the wire broke close to the needle, leaving it still in the wound. On the following morning the needle was found loose, and protruding from the lips of the wound. No primary union.

CASE VI.—*Amputation of Thigh; Acupressure by the Third and Eighth Methods.*

Christopher Ferris, aged fifty-three, admitted to New York Hospital, November 7, 1867, with compound fracture of the thigh. There has been only slight ligamentous union. Would not consent to amputation, although repeatedly advised to submit to it, until recently. Has been confined to bed almost the entire time. The muscular tissue has undergone, to a great extent, fatty degeneration. The parts very stiff and unyielding. Amputation of thigh in middle third, by circular method, performed January 5, 1869, by Dr. Krackowizer. An attempt was made to secure the femoral artery by the "New York twist," but the vessel was too much calcified to permit the twisting movement. It was accordingly secured by the third method, without difficulty. Five other vessels were secured by the "New York twist." Needles used were round and electro-plated. Wound closed with silken sutures. All the needles were removed *forty-eight hours* after the operation. No primary union. Patient still in hospital.

This case illustrates the perfect reliability of the third method with the needle and loop of wire. No matter what may be the condition of the artery, by this method a sufficient quantity of the surrounding soft parts is included to protect its walls from injury as the loop is tightened.

CASE VII.—*Amputation of Thigh; Acupressure by the Fifth and Eighth Methods.*

John Doyle, aged ten, admitted to New York Hospital, January 17, 1869, with compound fracture of the leg. Amputation was performed by the house surgeon, Dr. T. E. Satterthwaite, under the direction of the attending surgeon. *Femoral artery* secured by "New York twist;" three other vessels by "Aberdeen method." Needles removed *forty-five* hours after operation. There was considerable primary adhesion. Patient died of pyæmia, February 11, 1869.

CASE VIII.—*Excision of Mamma; Acupressure by Fifth Method.*

Sarah White, aged forty, admitted to New York Hospital, January 21, 1869, with enchondroma of the breast. Breast was removed by the ordinary incisions by Dr. Krackowizer, January 21, 1869.

Eight arteries were secured by the fifth method. Wound was left open for six hours until surface should become glazed. A needle, securing a small vessel, was then (six hours after operation) removed, followed by severe hæmorrhage. The needle was reapplied, and wound closed with silken sutures. All the needles, with the exception of one, which was overlooked, were removed *forty-eight* hours after the operation. The remaining one was removed *seventy-two* hours after operation. No primary union.

This case should inculcate the necessity of keeping an accurate account of the number of needles left in the wound, so that none may be overlooked in the removal. If the wire with which the needle was armed had been longer, this accident would not have occurred.

CASE IX.—*Amputation of the Shoulder-joint; Acupressure by the Fifth and Eighth Methods.*

Richard Sheehan, aged forty-seven, admitted to New York Hospital, February 5, 1869, with accidental amputation of the arm. Dr. Buck performed amputation at the shoulder-joint soon after admission. No regular method was pursued, owing to the extensive laceration of the soft parts. A large posterior flap was formed; acupressure to the axillary artery by "New York twist," and to *seven* other vessels by "Aberdeen method." Needles removed, *sixty-seven* hours after the operation, with "Buck's guide." Very little primary union. The needle securing the axillary, which had been thrust through the artery and thence through the capsular ligament of the shoulder-joint, where it leaves the neck of the scapula, was withdrawn with some difficulty. Patient was doing pretty well until the 17th inst., when at six o'clock A. M. he suddenly died.

I shall give the *post-mortem* appearances in this case, which were very accurately observed, in a subsequent part of this paper, when the subject of the pathological mechanism of acupressure is discussed.

The imperfectly-kept records of St. Luke's Hospital show that Dr. Robert F. Weir, one of the surgeons to that charity, revived acupressure with success in 1867, and was followed by others.

CASE X.—*Amputation of Arm; Acupressure by Fifth Method.*

Henry Kern, aged thirty-five, admitted to St. Luke's Hospital, August 8, 1867, with compound, comminuted fracture of arm, involving elbow-joint. Primary amputation was performed by Dr. Weir at junction of superior and middle third. Seven small arteries were secured by the fifth method; the brachial artery with a silk ligature, Dr. W. fearing to trust to the needle. Needles removed *forty-eight* hours after operation; the ligature came away on the eleventh day. No hæmorrhage. Stump healed by primary adhesion, except in the track of the ligature.

Had acupressure been used to the brachial, *entire primary union* might have been obtained.

CASE XI.—*Amputation of Thigh; Acupressure by Fifth Method.*

Thomas Crehan, aged eighteen, admitted to St. Luke's Hospital, August 21, 1867, with dislocation of knee from chronic arthritis. Amputation of convenience, through middle third of thigh, was done by Dr. Weir. Femoral and three smaller vessels secured by fifth method. Needles removed, three after *forty-eight* hours; the fourth, from the femoral, was so firmly retained by oxidation that it was not removed until *seventy-two* hours had elapsed. No hæmorrhage followed.

Patient died of uræmic convulsions, September 25, 1867. In this case there was no attempt at primary union.

CASE XII.—*Amputation of Forearm; Acupressure by Fifth Method.*

Patrick Rowan, aged forty-six, admitted to St. Luke's Hospital, July 25, 1868, with compound, comminuted fracture of right forearm, with other severe injuries to left hand and arm. Two hours after the accident, Dr. Buck amputated the right forearm.

Three vessels were secured by the fifth method, and wound closed with silver sutures. Subsequently, on account of hæmorrhage, one of the needles was removed, and a silk ligature applied. *Forty* hours after the operation one needle was removed, and on the *fourth day* the remaining needle.

Previous to the removal of the latter, it was necessary to open the wound to facilitate the escape of pus.

August 6th, patient had severe rigors and sank, and died nineteen days after the operation.

In this case, could not the needle have been effectually reapplied to the bleeding vessel, so as to obviate the necessity for the silk ligature? and why was one needle left until the fourth day?

Case XIII.—*Excision of Mamma; Acupressure by Third and Fifth Methods.*

Mrs. Anderson, aged sixty-eight, admitted to St. Luke's Hospital, May 2, 1868, with cancer of the breast. Breast was removed by Dr. Robert F. Weir, May 4, 1868. Two vessels were secured by acupressure, one by the third method, the other by the fifth. Needles removed *twenty-four* hours after operation. Wound almost entirely healed by primary adhesion. Suppuration and erysipelas followed, and death occurred ten days after operation.

Case XIV.—*Amputation of Thigh; Acupressure by Third and Fifth Methods.*

Thomas Hurd, aged thirty-three, admitted to St. Luke's Hospital, March 9, 1868, with encephaloid cancer of the leg. Amputation of thigh, at junction of upper and middle third, was performed by Dr. Buck, March 13, 1868. Femoral artery was acupressed by the third method, the other bleeding vessels by the fifth method. One of the needles from a smaller vessel was removed after *forty-five* hours; the remaining needles in *seventy* hours after the operation. No hæmorrhage. Patient died, March 29, 1868. In this case, the exhausted condition of the patient induced Dr. Buck to leave the needle on the femoral artery this unusual length of time.

Dr. James L. Little, of this city, has kindly furnished me a brief record of the following cases in which he has used acupressure:

Case XV.—*Amputation of Breast; Acupressure by "Aberdeen Twist,"*

with small needles. Needles removed *twenty* hours after operation. No hæmorrhage.

Case XVI.—*Amputation of Thigh; Acupressure by Third and Fifth Methods.*

Amputation through lower third of thigh for railroad injury. Skin-flaps and circular incision through the muscles. Femoral artery secured by the third method, the smaller vessels by the fifth method. Needles from smaller vessels removed on the *second* day. The pressure on femoral artery was allowed to remain until the *fifth* day, as the patient was constantly vomiting. No hæmorrhage followed the removal of the needles. Patient died on seventh day, from the effects of shock. Stump in excellent condition.

Where the larger arteries are acupressed, and persistent vomiting follows the operation, the needles should be left on longer than is ordinarily necessary, as the constant pumping of blood with such force might break down the new and tender adhesions by which the vessel is closed, and secondary hæmorrhage result.

CASE XVII.—*Removal of a Glandular Tumor of the Breast.*

Incision about three inches in length. One artery secured by first method, with a long needle. Needle removed *twenty* hours after, and the sutures on the third day. Wound healed by the first intention, without one drop of discharge.

This is an example of union by first intention as distinguished from that by primary adhesion. This distinction is insisted upon by Paget and others.

CASE XVIII.—*Removal of a large Adipose Tumor from Outside of Thigh.*

Incision seven inches long. Two bleeding arteries secured by first method. Pin sutures used to secure accurate coaptation.

Needles removed *twenty* hours after operation, sutures on the third day. This wound healed entirely by "the first intention." One ligature would have prevented this result.

CASE XIX.

During the operation of *external urethrotomy*, the bulbous portion of the urethra was wounded; the hæmorrhage was quite free. A compress was applied, which failed to arrest the bleeding. Several attempts to apply a ligature were unsuccessful. Acupressure done in the following manner succeeded: "The bleeding surface was seized with a pair of toothed forceps, and a short needle was introduced as in the first method, embracing the bleeding surface, which was about half an inch in length. A loop of iron wire was then twisted over the needle as in the third method, and the bleeding was completely arrested. Needle and wire removed *nineteen* hours after the operation."

Acupressure in this case was done virtually by the third method.

The fact that the ligature applied, in the ordinary way, to the continuity of the larger arteries for the cure of aneurism, etc., necessitated the slow separation by ulceration, thereby preventing primary adhesion in the wound, and subjecting the patient to the danger of secondary hæmorrhage, pyæmia, etc., induced surgeons long ago to search for some method by which an artery could be ligated temporarily for a certain number of hours, necessary to produce adhesion between the walls of the vessel, and then by the removal of the ligature to obviate these dangers.

Dr. Jones, by his experiments on animals, found that several divisions of the inner and middle coats of an artery, within a limited space, caused effusion of lymph in sufficient quantity to obliterate its tube, even when the ligatures were removed soon after the operation.

M. Amussat recommended the same procedure.

Mr. A. C. Hutchison, in the year 1800, tied the brachial arteries of two dogs, and removed the ligatures immediately; the effect was complete obliteration of the canal of the artery. Others at about the same time tried these experiments without the same success.

The fatal objection to this method by several ligatures was, that their application necessitated too great separation of the artery from its vital connections with its sheath and surrounding tissues, cutting off its nutrition, and thereby endangering its vitality.

Mr. Travers found, by experiments on the carotid artery of the horse, that a single ligature applied, and then removed at the expiration of from one to six hours, procured adhesion sufficient to effect the permanent obliteration of its tube.

Sir Astley Cooper tried the above method on the human subject for popliteal aneurism, removing the ligature after *thirty-two* hours; and, pulsation returning, applied it again for *forty* hours; after which there was no recurrence of the pulsation; but secondary hæmorrhage occurring on the *twelfth* day, it was again necessary to secure the vessel.

Others repeated the operation on the human subject, with various modifications, but it was abandoned, as it seemed to be impossible to fix a determinate period when the ligature could be withdrawn, with the assurance that obliteration of the artery would ensue.

Scarpa was the great advocate of this practice, with this improvement on those who preceded him. They divided the inner and middle coats, deeming this essential to the success of the operation. He endeavored to avoid this, merely bringing the walls in coaptation, by the interposition of a small cylinder of lint, spread with ointment, between the knot of the ligature and the artery. This, however, denuded the artery to a considerable extent, and was open to the serious objection of introducing, and allowing to remain in the wound, a considerable mass of foreign material.

A variety of metallic compressors have been contrived in times past, and applied to the exposed artery for the purpose of rendering it impervious. Among them may be named the serre-nœud of Dubois, Assalini's compressor; the presse-artère of Deschamp, an instrument contrived by Mr. Crampton, and the pincers of Baron Percy. With these instruments they succeeded in producing obliteration of the artery without rupture of any of its coats. Notwithstanding the fact that entire success followed their use, by men greatly distinguished in surgery, the profession generally refused to accept their views and clung to the old method by the single ligature.

The chief objection to most of these contrivances seems to be the necessity for great stripping and exposure of the artery in the operation.

The fact that temporary metallic pressure, by means of the needle and wire, does, with less exposure of the artery than by the ordinary ligature, obliterate its calibre, is now so well established by the experience in acupressure, that the interest of surgeons in this subject is rekindled.

Within the past few months I have applied acupressure with entire success to the femoral artery for popliteal aneurism, by a method which I shall describe. The case is one of such interest, apart from acupressure of the artery, that I hope to be pardoned for narrating it *in extenso.*

CASE XX.—*Temporary Ligature of Femoral Artery, for Popliteal Aneurism.*

Leopold Kah, Germany, aged twenty-nine, was admitted to New York Hospital October 20, 1868. A few weeks ago patient first noticed a swelling in popliteal region which was painful, and soon rendered him incapable of work. He was seen by three physicians, each of whom seems to have mistaken the nature of the tumor, as they opened it with the knife by small incisions three times in as many days. The openings made by the first two physicians were followed by a sharp spirt of blood which seemed to surprise them, as they each stitched up the wound and left him to the tender mercies of a third, who, making a bolder dash than his predecessors, was appalled by the gush of about two quarts of blood; he hurriedly bandaged up the limb and abandoned his patient, who was then brought to the hospital. On admission he was almost pulseless and excessively prostrated from loss of blood. The lips of the wound made into the aneurismal sac were sloughy.

October 21, 1868.—I secured the common femoral artery by the following method, at the suggestion of Dr. Buck: The artery was exposed in Scarpa's triangle, by the usual incisions. The sheath of the vessel was opened barely sufficient to allow a small aneurism needle, armed with a piece of strong, smooth, moderate sized hempen twine, to be passed round the artery; the ends of the ligature were then threaded through a small silver *double canula*, about two inches in length, and the canula passed on through the wound down upon the artery. The ligature was then drawn tight enough to stop the circulation, but not with sufficient force to lacerate the coats of the vessel, and the ends tied over the external extremity of the canula. The canula was then secured in a position at a right angle to the artery, against a roller-bandage placed on the thigh, and the roller in its turn was kept in place by adhesive straps. Wound was closed by silken sutures. Union by primary adhesion took place throughout the wound, except in the track of the instrument.

The ligature was removed with great ease *forty-seven hours* after the operation, and no blood followed it. The edge of the skin-flaps subsequently took on ulceration, but the union of the deeper parts was not disturbed. No pulsation could be detected below the point of acupressure, and the tumor was much diminished in size.

The threatened sloughing of the sac progressed until finally a cavity was left in the popliteal space in which a large fist could be buried. Owing to the great loss of blood which had occurred previous to his admission to the hospital, gangrene of the foot and leg supervened, necessitating amputation at the knee-joint, which was done November 13, 1868, by irregular flaps as sound skin could be found.

The patient eventually recovered, and was discharged, fat and hearty, February 8, 1869, with a good stump.

CASE XXI.—DR. BUCK *applied a Temporary Ligature to the Femoral Artery, for Popliteal Aneurism*, at St. Luke's Hospital, September 23, 1868.

Patient a young man, aged twenty-four. Femoral artery was exposed in the usual manner, and a silver wire (No. 26) placed under the artery; the ends were then crossed over it and secured by three half turns or twists. On the third day the wire was removed, but it was found necessary to reopen the wound, in order to untwist the wire without endangering the artery. No hæmorrhage, except from the disturbed adhesions, followed the wire, and after a reasonable time the patient was discharged cured.

Dr. Buck also applied acupressure by this same method, with the twisted silver wire to the subclavian.

CASE XXII.—*Artery; for Axillary Aneurism.*

This operation was done at St. Luke's Hospital, but it was found impossible to remove the wire by untwisting, without endangering the artery. It was therefore allowed to remain until it had cut through the vessel. Patient discharged cured.

CASE XXIII.

Dr. Markoe used acupressure by this same method, at the New York Hospital, September 29, 1868, on a man aged thirty-five, who was admitted with popliteal aneurism. He passed a fine iron wire around the femoral in Scarpa's triangle, and secured it by three twists; wire removed seventy-two hours after operation. In this case also it was found necessary to re-open the wound in order to untwist the wire. Gangrene of foot afterward set in, and patient sank into a typhoid condition, and died November 13, 1868. "The artery at the point of ligature was found slightly thickened, reddened, and its calibre but little diminished. The vessel was pervious, but a long thin clot, three inches in length, was found in it, extending on either side of the point of pressure."

The difficulties attending the removal of the wire, in the cases of Drs. Buck and Markoe, led me to prefer the textile ligature and the canula to the twisted wire, which is in itself without doubt more purely acupressure. If I were to use the same instrument again, I should substitute a small lead wire for the hempen twine. The objection to iron or silver wire is, that, in removing it on so short a turn round the artery, I should fear injury to its coats.

Dr. Hutchison's modification, which I have described already, would, I think, answer admirably for application in the continuity of arteries.

In the application of acupressure to the continuity of a vessel for aneurism, it seems to me that the amount of pressure used should be sufficient to cut off the circulation at once, so that the consolidation shall be rapid, enabling us to remove the needle after the shortest time has elapsed, consistent with safety; for, if the pressure be too long continued the artery will be cut through as by the ligature.

Tabular View of foregoing Twenty-three Cases.

NO.	OPERATION.	AGE	METHOD.	ACUPRESSURE DISCONTINUED.
1	Excision of mamma	33	First method	72 hours.
2	Amputation of forearm	23	First method	48 "
3	Amputation of leg	35	First method	72 "
4	Amputation of arm	50	Third and fifth methods	48 "
5	Amputation of knee-joint	40	Fifth and eighth methods	48 "
6	Amputation of thigh	53	Third and eighth methods	48 "
7	Amputation of thigh	10	Fifth and eighth methods	45 "
8	Excision of mamma	40	Fifth method	48 " 72 " needle overlooked.
9	Amputation at shoulder-joint.	47	Fifth and eighth methods	67 "
10	Amputation of arm	35	Fifth method	48 "
11	Amputation of thigh	18	Fifth method	48 & 72 hours.
12	Amputation of forearm	46	Fifth method	40 & 90 "
13	Excision of mamma	68	Third and fifth methods	24 "
14	Amputation of thigh	33	Third and fifth methods	45 & 70 "
15	Excision of mamma	....	Fifth method	20 "
16	Amputation of thigh	....	Third and fifth methods	48 & 120 "
17	Removal of glandular tumor of the breast	...	First method	20 "
18	Removal of adipose tumor of the thigh	....	First method	20 "
19	Wound of bulb of urethra	....	Third method	19 "
20	Acupressure of femoral artery for popliteal aneurism	29	Double silver canula and loop of hempen twine	47 "
21	Acupressure of femoral artery for popliteal aneurism	24	Twisted silver wire	72 "
22	Acupressure of subclavian artery for axillary aneurism	35	Twisted silver wire	Not removed, but allowed to cut through.
23	Acupressure of femoral artery for popliteal aneurism	35	Twisted iron wire	72 hours.

We have here twenty-three cases, never before reported, in which acupressure has been used — five times to the femoral artery after amputation of the thigh; three times to the femoral as a temporary ligature in the treatment of popliteal aneurism; once to the axillary artery after amputation at shoulder-joint, and to many less important vessels.

In only one case was the use of the needle followed by secondary hæmorrhage, and in that case this accident was evidently due to its careless application.

As most of the above cases occurred in hospital practice, where primary union has been the rare exception when the ligature has been used, I think it may be fairly claimed for acupressure, that it greatly increases the chances for that most desirable result.

Before considering the special advantages of acupressure as a hæmostatic agent, it is desirable that we should determine *the pathological mechanism by which it causes obliteration of an arterial tube.*

The few treatises on acupressure which appeared before Dr. J. C. Hutchison's essay was read before the State Medical Society give us but little light, shed by actual experiments performed on the arteries of lower animals, or from accurate observation of the *post-mortem* appearances of arteries so treated in the human subject. The fact that acupressure could be relied upon for checking hæmorrhage was established, but how the vessel was permanently closed was the question.

Dr. Hutchison devoted much time and patient investigation to this subject, and I now propose to give in brief the results obtained. He performed seven distinct experiments with acupressure on the common carotid arteries of sheep and dogs:

First Experiment consisted in exposing by dissection the left common carotid of a sheep, and closing it by a pin and wire, according to the method which I have described above, as devised by himself; the vessel was then divided on the distal side of the pin. Free hæmorrhage occurred from the distal end of the divided artery; this was arrested by another pin, without disturbing the vital connections between artery, vein, and nerve in their sheath. Removed both pins at the end of *forty-one* hours.

Dissection.—The animal was killed twenty-five days after the operation.

"The artery, vein, and nerve were matted together by inflammatory deposits." After carefully removing a considerable portion of the artery, both ends were found closed at the point of acupressure, it being impossible to force air through it by the blow-pipe while the artery was held under water.

"On opening the vessel, no clot was found in either the distal or cardiac ends, but they were firmly closed by being transformed into a dense fibro-cellular tissue for the extent of one-third of an inch." A careful microscopic examination revealed the fact "that the artery at the place of operation had been cemented to surrounding tissues by organized exudation, so that the continuity of the vessel was demonstrated only by dissection. Lymph had been effused, both within and without the vessel, at the point of acupressure, and the extremities were connected together by firm fibrous tissue."

Second Experiment was performed on the right common carotid of a sheep by two needles, half an inch apart, and the artery was divided between them. Pins removed at the end of *forty-one* hours.

Animal killed twelve days after the operation. A portion of the artery was removed, and by the blow-pipe test both ends were found perfectly closed. A small clot was discovered within the artery, both upon the distal and cardiac side. "The bases of both clots were decolorized, and adhered firmly to the internal coat of the vessel. . . . The extremities of the artery were converted into a dense fibro-cellular cord, and its coats surrounding the clot were three or four times their usual thickness, and the calibre diminished."

Third Experiment, upon the common carotid of a sheep, with a single acupressure pin applied in its *continuity*, for the purpose of ascertaining the condition of the vessel under such circumstances; but the experiment yielded no results, as the wire was drawn so tight that the internal and middle coats were divided, giving *post-mortem* appearances precisely such as are found after the use of the ligature by the ordinary method.

Fourth Experiment.—Two pins were passed under the common carotid of a sheep, three-quarters of an inch apart, and the vessel divided between them. By an oversight, the pins were not removed until after the lapse of *seventy-four* hours. Animal was killed four days after the operation. By the blow-pipe test both extremities were found completely closed. A conical clot was found in both the distal and cardiac ends, which clots were adherent by their base to the internal coat.

Fifth Experiment.—The common carotid of a dog was closed by acupressure in its continuity. Needle removed after *twenty-five* hours, and animal killed on the seventh day. The artery was agglutinated to the surrounding tissues, and was entirely impervious by the blow-pipe test. Upon both the cardiac and distal side of point of pressure there was a clot. "*The clot was continuous, and at the point at which the needle was applied it was firmly adherent to the internal coat of the vessel.*" The internal and middle coats of the artery were thickened at point of acupressure, thus diminishing its calibre.

Sixth Experiment.—Acupressure pin applied to common carotid of a sheep in its *continuity*, and removed after *forty-seven* hours.

The vessel was at the same time vivisected. Artery found completely closed.

A continuous clot occupied the vessel on each side of the point of acupressure, as in experiment No. 5. "The clot was intimately connected with internal coat of the artery at the seat of pressure, and the vessel was slightly contracted at this point."

Dr. Hutchison explains the continuity of the two clots in experiments Nos. 5 and 6 "by supposing that some thinning of the walls of the vessel was produced by the pressure of the pin, which became loosened and allowed the vessel to expand."

Seventh Experiment.—Acupressure to common carotid of a dog, in its continuity, by a single pin. The pin removed in *twenty-nine* hours, and the animal was killed *twenty-five* days after the operation.

The artery was removed, and "one-third of an inch of the vessel, at the seat of acupressure, was converted into a solid fibrous cord, in which no trace of the arterial coats could be found," under the microscope.

"On both the distal and cardiac sides of the solid portion were found remains of a red clot." This specimen shows the *ultimate* changes which take place after acupressure.

Eighth Experiment.—Dr. C. M. Bell, Curator of the New York Hospital Museum, November 24, 1868, applied Dr. Buck's modification of acupressure (which method I have already described) to the left common carotid of a sheep, in about the middle of its course. On the next day faint pulsation could be felt just above the point of pressure—apparatus tightened. On the second day there was no pulsation at this point. *Seventy hours* after the operation, there having been no pulsation for the last *forty-six hours*, the instrument was withdrawn without any difficulty. There was primary union, except where the canula entered. The animal was killed after sixty-two days, and a portion of the artery removed by dissection. "Remarkably little change in the tissues surrounding the vessel. At the point of acupressure the artery was slightly expanded, bulbous. This bulbous appearance was quite perceptible because of the diminished size of the artery above and below this point. On slitting up the artery it was found occluded, at the expanded portion above mentioned, by a firm tissue one quarter of an inch in length, of fasciculated appearance, which proved, when examined by the microscope, to be fibro-cellular tissue. This tissue was firmly adherent to the internal coat of the artery; while this coat, for about one quarter of an inch above and below, was thickened and infiltrated, as if the fibrous plug had been formed by lymph exuded by the internal coat alone."

Ninth Experiment.—Dr. Bell also applied acupressure, by means of the same method, to the right common carotid of a sheep, just below its bifurcation. Only sufficient force was used to stop the circulation. At the end of *forty-eight hours* the apparatus was removed. The animal was killed eighty-two days after the operation. The artery was found pervious, but diminished in calibre for three or four inches below its bifurcation, and its coats were thickened at the point of acupressure. In this case it would appear that the experiment failed only because sufficient care had not been used to preserve the acupressure, throughout its application, sufficiently firm to entirely stop the current of blood at that point.

A third experiment of Dr. Bell's obliterated the artery at the point of acupressure, but, owing to the fact that the ligature was drawn so tight as to lacerate somewhat the internal coat, the occlusion cannot be considered as due to pure acupressure. The results in this case were similar to those obtained in Dr. Hutchison's third experiment. These experiments of Dr. Bell's have never been published. In connection with these experiments on the lower animals, I shall relate the *post-mortem* appearances presented in the axillary artery of the patient, on whom Dr. Buck amputated at the shoulder-joint, and given in my narrative of cases as *Case IX.* I cannot improve upon the careful and minute description given by the curator, Dr. Bell, and shall therefore copy it verbatim from the hospital case-book:

Post-mortem Appearances in the Axillary Artery of Richard Sheehan. (See Case 136, vol. xxxviii., 1st Surgical Division.) "With some little difficulty the end of the axillary artery was discovered firmly adherent to the contiguous tissues, so firmly adherent that it required the knife to separate them. These having been carefully dissected away, the immediate extremity of the artery was found patulous, the artery slightly twisted upon its axis, and just within its open mouth could be seen the rounded base of a yellowish plug. It was found that the axillary had been compressed one-quarter of an inch below the origin of the posterior circumflex (which was of large size, and had also been compressed), and a half inch below the subscapular. After demonstrating the fact that the axillary was entirely occluded, the artery was slit up and found to have been closed by a firm disk-plug three-eighths of an inch long, of a color varying from yellowish white to a dusky red, which presented the appearance of a coagulum undergoing organization. This plug was not conical in shape, only gently rounded at its apex and base, and was adherent throughout its length to the inner surface of the artery. It could, however, be stripped up from the artery, requiring some little force--seeming to be glued to it by the interposition of some material unlike that composing the clot. This material proved on minute examination to be lymph, the exudation being more abundant and the union more apparent where the pressure had been immediately applied. The internal surface of that part of the artery which was in contact with the clot was reddened, roughened, and the coats somewhat thickened, and firmly contracted on the enclosed plug, reducing its calibre, but not perceptibly diminishing its size. It was found that the posterior circumflex had also been twisted and compressed one-quarter of an inch from its origin, and in addition to the clot—which in the axillary passed over its mouth and occluded it—it contained a firm white clot, not, however, adherent to its internal surface, except at its base.

"Around the base of this clot the cut extremity was found contracted and united as if by adhesive inflammation, forming a distinct *cul-de-sac.* This union was very slight, if at all, between the internal surface, but between the cut extremities of the artery it was quite firm. Its walls, like the axillary, were thickened and reddened. In the subscapular artery was found a long (one and a quarter inch) forked and detached clot."

The above experiments and observations teach us very clearly the way in which an artery is closed after acupressure. We have the clot and the adhesion which closes the vessel entirely—converting it into a fibrous cord—and this result we obtain with positive certainty, without any wound of the internal and middle coats and the consequent active inflammation between the cut surfaces.

The ligature does not close the calibre of an artery with more certainty nor more perfectly. It therefore seems to me proven that acupressure is the safer method, as by it we avoid that high degree of inflammation induced by the ligature, advancing to the stages of ulceration, suppuration, and mortification.

I believe that this advantage possessed by acupressure over the ligature renders it much safer when properly applied—for an artery in its continuity, in the cure of aneurism. I say when properly applied, for great care must be used in the election of a method which shall present a smooth metallic surface to the vessel, thereby avoiding ulceration of its coats. Ligatures never come away from an artery tied for several days, and if the vessel be of large size, or any of the surrounding tissues be included within its grasp, it may not come away for weeks. It is only by the process of ulceration and sloughing that it is released. During all this time there cannot be complete union between the lips of the wound—the ligature acting as a foreign body and suppuration existing of necessity along its track. Several ligatures are generally required, which are twisted together and brought out at the angle of the wound; these constitute a seton, and from their foulness increase the dangers of septic poisoning.

There is also danger that, when the ligature separates, the artery may not be entirely occluded, the ulcerative process having opened the vessel beyond the point of closure, and secondary hæmorrhage result. With acupressure this accident does not occur.

The necessary laceration of the coats of an artery when torsion is practised, and the probable detaching of considerable portions of the lacerated tissues, must be followed by sloughing and suppuration, thus interfering with primary union, and adding the danger of pyæmia to the other complications. By the use of acupressure we escape these hazards, are enabled to remove the pins at any time, thus placing the wound in the most favorable condition for primary union. Soon after acupressure began to be extensively used abroad, Prof. Syme and others revived torsion as an opposition hæmostatic measure.

During the year past, Prof. Syme, in Edinburgh, whom I am informed would never even look at a trial of acupressure, and Mr. Lister, in Glasgow, have used torsion in nearly all their cases, and in both hospitals the mortality has been about one in two, to one in two and a half, and this, notwithstanding the fact that carbolic acid has been freely used. I have authority for the above statement.

Surely such experience does not offer much encouragement for the practice of this measure.

As to the *time* for the removal of the pins, much has yet to be learned. *Forty-eight* hours for the larger, and *twenty-four hours* for the smaller vessels, seems to be the outside limit of necessity, but I doubt not that a much shorter time will ultimately be found ample for all requirements. Indeed, cases are recorded where the pins have been accidentally removed from the cut end of the femoral artery, after amputation, in *four hours*, and from the posterior tibial artery in *twelve hours*, and in neither case did secondary hæmorrhage ensue.

It is also a matter of no little importance that, for the *few hours* in which it is necessary to have any foreign body in the wound, that substance should be of a less irritating kind than silk or any textile fibre. Where the coats of an artery are so much diseased as to render it impossible to secure it by the ligature, the acupressure-needle can be used with perfect safety.

After operations, bleeding from the open mouths of large veins frequently gives much trouble. The application of the needle checks it, and, as the pressure can be removed at any time, obviates the danger arising from the use of the ligature under such circumstances.

Another great advantage possessed by acupressure is, that it demands no particular skill in manipulation, is done with great rapidity, and requires the aid of no assistant.

I am not to be numbered among those who believe that acupressure is to supersede the ligature as a hæmostatic agent, but I do believe that it is to be preferred in all cases where our aim is to procure primary adhesion in wounds made either by the surgeon's knife or by accident. In the foregoing paper I have considered the means employed by Nature and art for suppressing hæmorrhage, and, by contrasting the different methods, have endeavored to make clear the advantages and faults which pertain to each.

In developing this plan I have, at the risk of tediousness, narrated cases, and given the pathological mechanism by which arteries are closed after the various methods.

If my effort shall awaken the attention of a single surgeon to the subject of acupressure, and prompt him to further investigation or trial, my aim is accomplished.

ART. II.—*Concerning the Action of Opium upon the Uterus, and particularly as a Parturient Agent.* By P. C. BARKER, M. D., Morristown, N. J.

"Parturition consists in the expulsion of the fœtus and its appendages from the cavity of the uterus, and ends in the separation of the child and the mother" (Churchill). It is accomplished by means of non-striated contractile fibres, which are practically muscular, and constitute what is generally termed "the muscular coat of the uterus." These fibres are arranged in longitudinal oblique and (circular) transverse directions. The first two predominate in the body, and the latter in the cervix, and particularly in the "os uteri externum."

Before the expulsive contractions commence which terminate the process, these circular fibres should relax, and the "os" become widely dilated; but irregular contractions of the different sets of fibres, or contractions of the circular alone (constituting false pains), or rigidity of the "os uteri," due to tonic contraction of its circular fibres, often prevent this physiological dilatation, and prove the source of great distress to the patient and annoyance to the obstetrician.

It was in cases of this character that I discovered in opium a valuable parturient agent. I will narrate a few cases, which will illustrate how it became manifest to me:

Case I.—Mrs. H., about twenty-five, a strong and healthy woman, primipara, was taken in labor two p. m., July 15, 1862. Saw her soon after. Pains frequent, and of moderate severity; os dilated sufficiently to admit the point of the index-finger. Head presenting in first position. Left her for half an hour, and upon returning found her condition unchanged. Visited her at intervals until late in the evening, when, no progress having been made, ordered antimon. et potass.-tart., gr. ⅛, every half hour. Went home, leaving directions that I should be sent for if any change occurred. Messenger came for me about two a. m., 16th. No further dilatation. She complained very much of the severity of the pains. Tartar emetic, gr. ¼, every half hour. No improvement resulting, and nausea being constant, it was discontinued in the morning, and a stream of warm water was thrown upon the os, by means of a Davidson's syringe, for half an hour. This was repeated three times during the morning.

Two p. m.—Still no dilatation. Patient a little feverish, and complaining of being very tired and sleepy. Ordered morph.-sulph., ¼th, and left her to get a little sleep, while I went to attend to other engagements. Returning about an hour after, I found mother and child comfortably asleep side by side. About half an hour after taking the morphine she had a hard expulsive pain, and before any one could leave the house the child was born. The pains had not changed in character until just before the termination of the labor, nor had she been asleep.

Case II.—Mrs. O., thirty-five, multipara. Previous confinements easy. Taken in labor with her fourth child, November, 1863. Pains of same character as in Case I. for sixteen hours, producing little dilatation. At one a. m. gave morph. sulph., gr. ⅓, hoping to quiet the pains. Left for home, a short distance away, and retired at once. Just as I was getting asleep, a messenger came for me in hot haste, stating that the child was born. Hastily dressing, I returned in time to remove the placenta. Less than three-fourths of an hour had elapsed since I quitted the house. She had but one pain, of different character from those which had tormented her so long unavailingly, previous to taking the morphine.

Case III.—Mrs. W., about twenty-four, primipara, sent for me early in the evening. Being absent from home, my former partner, Dr. F. D. Leute, of Cold Spring, N. Y., answered the summons. Upon my return, I went to relieve the doctor. There was no dilatation, although the pains had been recurring for some time. We gave her morph. sulph., gr. ¼, and went home, giving directions to send for me should any change occur.

On the following day, I learned that about half an hour after our departure she was seized with severe expulsive pains, which terminated the labor before a messenger could be dispatched after me.

It is obvious that morphine was given in these cases, as it is usually given by the profession, if at all, with the intention of obtaining a respite from the pains, in the hope that when they returned they would be more efficient. I was surprised in each case at the result, although in the first I attributed it to the repeated use of the warm douche, from its recognized power in certain cases of this character. In the succeeding cases I was obliged to look for a different explanation, and at length concluded that the morphine increased the expulsive power of the body of the uterus to a degree sufficient to overcome the circular fibres and connecting tissue of the "os uteri." Further light was thrown upon the subject by the following case:

CASE IV.—Mrs. G., twenty-eight, multipara. In labor a number of hours. Os uteri remaining about half dilated, and rigid. Gave morph. sulph., gr. $\frac{1}{4}$. About half an hour after, while making an examination during a pain, my first and second fingers being applied to opposite sides of the os, in order that I might observe the effect of the pain upon its hitherto unyielding tissues, I was surprised to feel it easily dilating.[1]

In this case I suspected that while opium stimulated the fibres of the body of the uterus (longitudinal and oblique), it also relaxed the circular fibres of the os. Further observation, in a large number of cases of varied character, has convinced me that opium, instead of having a general anodyne effect upon the uterus, possesses this special power as a parturient agent. I say general anodyne effect, for while it sometimes quiets uterine contractions (witness its universal use for this purpose), yet it is in those cases in which the circular fibres are called into action alone, or where the longitudinal and oblique fibres contract irregularly—in short, in *false pains.* I am fully persuaded that *opium never did or can arrest a physiological* labor.

I have many times been called to cases in which the pains have returned regularly and with increasing intensity for a number of hours without producing dilatation to any extent, and after giving a full opiate have had the satisfaction of finding a marked improvement after sufficient time had elapsed for its absorption, the patient having even harder contractions with less distress than before, and the os uteri being speedily dilated.

---

[1] I will add, for the benefit of those interested in the discussion which some time since appeared in the columns of one of our medical journals, concerning the propriety of making forcible attempts to dilate the os with the fingers, that I have for several years practised it, and think that I have shortened the first stage of labor many times thereby. In cases where the anterior lip has not been fully dilated after expulsive pains began, I have also shortened the second stage by persistently pressing upon it until it receded beyond the presenting portion of the head, even after it had become œdematous. The *rationale* is quite simple: the tissues being subjected to increased pressure, relax sooner than they otherwise would.

During the first stage of a physiological labor, I believe that the circular fibres of the os are passively relaxed; and that the active, usually gentle, contraction of the fibres of the body of the uterus serves to overcome the resistance which the tissues of the cervix and os present to dilatation.

Now, if the circular fibres of the os retain their tonicity, or if they contract with those of the body during a pain (and I have felt them contracting in a number of cases), no dilatation can be effected; or, at any rate, it will be with great difficulty, and the resulting distress will be greater than when they offer only the minimum amount of resistance.

The cases above narrated and referred to have taught me that opium possesses the power of relaxing the circular fibres, at least of the os, and of stimulating the longitudinal and oblique fibres into active contraction. It is upon these principles that opium is exhibited in dysmenorrhœa, when it is dependent upon spasmodic contractions of the circular fibres; or where it is owing to the presence of "menstrual decidua," clots, etc.

In abortions it is an invaluable remedy, facilitating dilatation, diminishing hæmorrhage, promoting the expulsion of the placenta, and lessening suffering.

Ergot, on the other hand, by causing contraction of the circular fibres, retains the placenta, and therefore should rarely be given (in abortion) until after the fœtus and secundines have been expelled.

Placenta prævia.—I have used opium in three cases of placenta prævia, one at the sixth month and two at term, saving the mother in each instance. In another case I attempted to turn, but, having made an erroneous diagnosis as to position, the placenta being planted directly over the os uteri, I introduced the wrong hand, and, failing to get hold of the feet properly so as to bring them down, I detached the (entire) placenta rather than lose time by changing hands. I mistook a R. Occip. Post. for a L. O. Anter. position. The hæmorrhage ceased at once, and the mother subsequently did well.

I think that opium meets two important indications in *placenta prævia*: 1. It facilitates dilatation, thus shortening the period of greatest danger. 2. It promotes the expulsive power of the uterus. It also serves to lessen hæmorrhage by a special hæmostatic action.

It is an interesting fact that, in one of these cases, when the respiration was reduced to four in the minute by cumulative action of the opium, which had been too frequently repeated by mistake, the uterus expelled the child with one pain, thus illustrating my statement that opium does not possess the power of arresting normal uterine contractions.

Hour-glass Contractions, etc.—While hour-glass, cylindrical, or other irregular tonic contractions of the uterus (particularly those which occur after the expulsion of the fœtus) may be (and doubtless are sometimes) spontaneous, still in my experience they have always seemed to be due to ergot. Since I have learned the special power of opium, as set forth in this paper, I have used it in these cases with invariable success, although some of the most approved obstetric authorities say such use "is objectionable."

I will give the following cases in point:

CASE V.—December, 1864. Mrs. McD., aged about thirty-eight. Primipara. Labor progressed steadily until the head had fully distended the perinæum. Retrocession followed every pain, and, as they were neither strong nor long, no progress was made. The vulva too was well dilated, and I gave f ʒ iss. Squibb's fl. ext. ergot to complete the delivery. Fifteen minutes afterward the peculiar contractions produced by ergot commenced, and the child was soon born. Placing my hand upon the fundus of the uterus (it having been pressed upon by the hand of an assistant while the child was being delivered and the funis tied and severed), I discovered it to be much elongated, reaching above the umbilicus; and, making a vaginal examination, found the placenta to be beyond the reach of my fingers, and, introducing the hand, discovered it so tightly grasped by an hour-glass contraction that I could not remove it. Gave morph.-sulph. gr. ⅓, noting the time. A little less than half an hour afterward I was awakened (having fallen asleep from great fatigue) by a contraction of the uterus under my hand. The placenta was expelled with considerable impulse, and the uterus contracted down almost entirely below the os pubis (which, by the-way, judging by my experience, it seldom does, teachers and text-books to the contrary notwithstanding).

Case VI.—Mrs. S., multipara. A delayed labor dependent upon inefficient pains. Gave f ʒ iss ergot. The child being born, I delivered the placenta at once (as I now invariably do after giving ergot). A cylindrical contraction immediately followed, the fundus rising considerably above the umbilicus, in fact almost as high as the ensiform cartilage. The cylinder was about three inches in diameter, firmly and uniformly contracted. An opiate was given, and in due time a permanent globular contraction followed.

Dr. J. D. Trask, in his essay upon "Rupture of the Uterus," published in the *American Journal of Medical Sciences*, January and April, 1848, gives four cases of rupture of the uterus due to ergot. Malgaigne and others have reported similar cases. The following case is given to show how this accident *might* be produced in a diseased or even very powerful uterus, as well as to illustrate the apparently antagonistic effects of ergot and opium upon the gravid uterus.

Case VII.—Mrs. M., multipara, about thirty-five. Previous confinements easy. Present labor not worthy of note until the os was nearly obliterated, a ring only being left, when dilatation was for some unknown reason arrested, and no progress made for an hour. The uterine contractions then becoming inefficient, gave ʒ iss ergot. As soon as the pains peculiar to ergot began, I made an examination, and found the os less dilated than before, and its fibres contracting with those of the body. Gave gr. ⅛ morph.-sulph. Within half an hour the pains had become more like those of a "physiological labor," the os uteri relaxed and became dilated, and the expulsion of the child speedily followed.

I gave opium in this case, with the expectation that it would produce a relaxation of the circular fibres of the os. It seems to have exerted this power in opposition to ergot as effectually as in the "hour-glass" and other irregular contractions above mentioned.

It may readily be seen that the simultaneous action of the ergot upon the os and body *might* have caused a rupture of the uterus. The contractions produced by ergot are continuous. I have often observed, however, that they have not been general, but have occurred in different sets of fibres successively. Herein lies one great danger of its use. In these, as well as all other irregular contractions of the uterus, I find opium a *prompt and reliable remedy.* In fact, I now use it in those cases of delayed labor dependent on inefficient uterine contractions, instead of ergot.

This property being established, the administration of opium admits of wide application in uterine therapeutics. In dysmenorrhœa, abortion, irregular contractions of the uterus of all kinds, previous, during, and subsequent to labor, and in placenta prævia as an adjuvant to Barnes's dilator, it will be found to be a valuable remedy; more certain in desired action (when given under proper indications) than any other remedy in our profession. Such at least it has been in my hands in quite an extensive obstetric experience.

In dysmenorrhœa, opium is given to quiet the contractions of the circular fibres (when this variety is present). In abortion, it is administered in the hope that the pains are caused by irregular contractions; and, if there is no dilatation (producing a partial separation of the membranes), it will often prove successful. If, on the contrary, the process has progressed so far as to render abortion inevitable, opium promotes it by relaxing the circular fibres of the os. It may appear at first strange to hear such apparently opposite properties ascribed to a remedy; but there is no inconsistency in the statement. The irregular (colicky) contractions do *not* constitute abortion, but they may produce it; and there is much less risk in a temporarily relaxed os uteri without pain, than in a normal condition of the os with contractions of any kind in the body. In the "irregular contractions" at term (as in Cases V., VI., and VII.), it acts promptly.

I will state that cases might have been multiplied to a large number illustrating this subject; but the practical value of my paper would not have been enhanced at all, as the cases selected are as well or better-marked instances, each of its kind, than any others recorded by me since I commenced my observations seven years ago. (I had previously observed its powerlessness in quieting physiological uterine contractions, in the lying-in wards of Bellevue Hospital, while an interne.)

With respect to the mode of administration, I am not aware that it makes any difference what preparation of opium is used. I have generally employed solid opium pills, grs. 1 to 3, or morph.-sulph. gr. $\frac{1}{6}$ to $\frac{1}{2}$ (the latter given dry on the tongue if nausea is present) at term. In abortion, if seen early, I give enemas of corresponding strength, usually employing from ʒ ss to ʒ i doses of opii tinct. in a tablespoonful of warm water, to be repeated after three hours if the pains continue, or later, if they return after being quieted. If abortion can not be prevented, the hypodermic syringe and Barnes's dilator or tampon are preferable. I have not used the hypodermic method at term, having been satisfied with the more gradual effects of administration by mouth, and besides I have thought that perhaps its rapid absorption into the maternal circulation *might* be injurious to the child. I have never observed any such effects following the administration by mouth. And, what is very singular, it seldom induces somnolency in the mother.

There are cases in which the os uteri (from previous inflammation) is almost, and sometimes entirely, undilatable, over which opium (in common with all other known therapeutic agents) exercises no control, and for which the knife is the remedy.

In conclusion, it will be seen that the theory set forth in this paper explains phenomena in the action of opium upon the gravid uterus which have hitherto, from the time of Denman to the present, been regarded as exceptional; and that it establishes the value of this remedy as a parturient agent.

My object in calling the attention of the profession to these peculiar and very useful properties of opium has been, the promotion of a wider knowledge, and a more general application of them in practice; and I feel assured that, if opium is administered in the conditions and doses above indicated, it will not disappoint the obstetric practitioner.

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, April 5, 1869.

DR. GEO. T. ELLIOT, Jr., President, in the chair.

AFTER transaction of the customary preliminary business, the paper of the evening was read by Dr. George A. Peters, his subject being Acupressure, with some reference to its application in the Continuity of Arteries.

[This paper is published in full, in another part of this number of the Journal.]

The President remarked that he saw a number of surgeons present whose experience amply qualified them to comment on the paper just read, and he would venture to call upon Dr. Buck of the New York Hospital.

Dr. GURDON BUCK remarked that there was but little which he could even desire to say on the subject at issue, for the paper of Dr. Peters had most fully set forth the experience at the New York Hospital with acupressure. His own experience with this method was in a measure identified with those hospital experiences, as they had mostly occurred during his term of service there. The judgment of all the surgeons of the hospital was decidedly in favor of the plan of arresting hæmorrhage, which they believed was a step in advance of the usual methods of treatment, and would prove a valuable resource in surgical procedures and perfectly reliable. Concerning the so-called New York twist, Dr. Peters might have mentioned how this method had already been subjected to some very trying tests, which seemed to substantiate its claims to acknowledgment. He recalled one instance in particular—of its application by Dr. Krackowizer, in an amputation of the knee-joint. An ordinary steel needle, not plated, was used; after forty-eight hours an attempt was made to remove it. It was so firmly held that the traction necessary for its removal was sufficient to pull the whole weight of the stump toward the operator, and the wire attached to the needle gave way. The needle, left to itself, came away the next day, no hæmorrhage whatever followed. Other applications of this method, i. e., the New York twist, showed that it was reliable. Dr. Buck gave the preference to the use of ordinary needles, gilded and threaded with wire. The treatment of wounds by the acupressure method must not only facilitate union by the first intention, but, by the entire removal of all foreign substances from the wound at the end of forty-eight hours or thereabouts, the chances of consecutive constitutional disturbances are lessened, and hence the danger from pyæmia and other secondary accidents very materially diminished. Certain contingencies may arise in practice, as in Dr. Little's case of perineal section alluded to in the paper, where acupressure must prove a most valuable resource. In all deep wounds, it is not infrequently very perplexing and embarrassing to apply a ligature with any degree of accuracy or care. Then the insertion of an acupressure needle or pin will accomplish the object most readily, and hæmorrhage under such conditions can easily be restrained. Regarding the application of acupressure to the continuity of arteries, in the treatment of aneurism, is certainly a most interesting subject for investigation. Experiences thus far have not, perhaps, accumulated to sufficient extent to justify absolute deductions as to its value. It is to be hoped that these trials will be continued, and the results, which now must be considered somewhat premature, made available for all.

Dr. Hutchinson, of Brooklyn, said, that he had listened with profound interest to the paper of Dr. Peters, and this interest was heightened because the paper gave for the first time the history of the operation in New York city, and because, being brought out by a surgeon of one of our largest hospitals, it would have a tendency to bring the subject and methods of acupressure more prominently before the profession of this country. In his practice for the last two years, during which time he had had occasion to perform a number of capital operations, he had employed no other means for the arrest of hæmorrhage than acupressure, except in a few instances where torsion was promptly efficient in restraining the flow of blood from small vessels. But torsion must not be used if we expect union of wounds by primary adhesion.

There are two considerations on which, in his estimation, the value of the operation depends. 1. Is it a reliable means of arresting hæmorrhage? 2. Is it not the means of saving many lives which might have terminated fatally, had the ligature been used? The evidence upon both these points is very strong, and cannot be gainsayed. Regarding the application of acupressure in the continuity of an artery for the cure of aneurism as described by Dr. Peters, he had not applied it for this purpose; but in his experiments upon animals he had used it so frequently to close vessels in their continuity, that he was convinced it will soon be acknowledged as a proper procedure. Not the least of the advantages of the method which had been associated with his name is, that the application can be made without disturbing the organic relations of the parts, and when the object is accomplished the pin and wire are easily removed. Dr. Hutchinson then demonstrated, upon a model prepared for this purpose, the method, and also another method which had been proposed by Sir James Simpson, and which had not been brought forward in the paper of the evening. It consisted in passing a long needle, sharpened at both ends, down through the bottom of the incision, between the artery and nerve or vein on one side, till the point of the needle emerges an inch or more, at a proper angle, through the skin externally. Afterward, using that emerged point as a handle, the other or anterior end of the needle may by it be pulled down to the plain or level of the vessel, then passed or bridged over the artery, and ultimately fixed by being driven a few lines into the tissues beyond—avoiding, of course, the vein or nerve that may lie in that side of the long needle, in whatever manner used to bridge over the artery, would require merely to pass over it at such an angle as is sufficient for the full closure of the vessel; and and it is to be remembered, that a very slight amount of steady and fixed pressure is quite sufficient for this purpose.

Dr. Alfred C. Post said that he had no personal experience with the practice of acupressure. He was inclined, however, to think favorably of it, especially as a means of arresting hæmorrhage in large wounds, but did not favor its application in the continuity of arteries. There were certain practical difficulties here, some of which had already been suggested, which, however, future experiences might obviate in a measure. The difficulty of detaching and removing the pin or wire has proved a very serious one, and, notwithstanding the endeavor of Dr. Buck to evade this difficulty by the use of the double canula, there is still much trouble in accomplishing the object, and in the small number of cases in which it has thus far been tried the results have not been favorable. Our experience is too brief to enable us to form a conclusive opinion of the merits of the method, and this in his estimation demanded for the present at least a suspension of judgment.

Dr. KRACKOWIZER said it was only tedious to extend remarks on a paper which was so complete and well digested as that read this evening, and he could add nothing to it.

He would, however, express an opinion somewhat at variance with that of Dr. Peters, regarding the estimate put upon the New York twist, added by Dr. G. Buck to the methods already known; for he had inferred that he, Dr. Peters, was not inclined to look with very great favor upon it. In his estimation, this method was the best yet brought forward in large bleeding vessels which were loosely embedded in their sheaths, and were accompanied by veins and nerves. In this condition of things the Aberdeen twist was not available, and generally the third or fourth method would have to be resorted to. Now, in the New York twist, the needle armed with wire was all that was necessary; whereas, in the third and fourth methods, a wire loop besides was indispensable. Harmless as metallic threads might generally be looked upon as not causing suppuration, yet they were foreign bodies, and the less we have of them in a wound the better. The New York twist puts *one* foreign body in the wound; the third and fourth methods, which it supplants, *two*. Moreover, although ordinarily there is no difficulty in withdrawing the wires, yet that they will never get entangled in the tissues, and never disturb union, cannot be maintained. In the New York twist the needle and wire are withdrawn in the very line in which they are inserted. In the third and fourth method the same is done as far as the needle is concerned, but the loop must needs tear a little, and enlarge the track through which the needle has travelled out.

He would add a word in defence of the ligature. For, although he announced himself a convert to acupressure, he claimed that the ligature still has its value, and that it will be never entirely superseded. Satisfactory as the experience with acupressure as a hæmostatic was, that a more perfect mechanism to arrest bleeding from open vessels could be devised than the ligature, he would deny. The inherent defects of the ligature were, that it could not come away except by being liberated from its hold by ulceration; and, being made of porous material, would absorb the liquids from the wound, and so become a receptacle for decomposition of organic material. These two things went of course directly against the first conditions of union by first intention. But, to put the many failures of large wounds not healing by first intention exclusively or prevalently to the use of textile material for ligatures, was doing injustice to the ligature as a hæmostatic method. Much disturbance of the union by first intention, by ligatures, could be avoided, by arranging the threads properly, and carrying each one out of the wound separately and in the shortest direction. If surgeons would only renounce the abominable practice of gathering up all the ligatures, radiating from different points, in one skein—a rope, as it were, to be brought out by one angle of the wound—much needless suppuration could be prevented. Besides, if care were taken to make an even wound, with all the parts cut as much as possible in one plane; if operations were not unskilfully prolonged by the necessity of subsequent trimming of redundant projections; if wounds were not closed before every parenchymatous bleeding had ceased; if stumps were properly dressed and comfortably placed, more would be done to avoid suppuration than acupressure could effect, most excellent and most rational as this method was. All these points enumerated, taken together and separately, had more to do in causing failure of healing by first intention than the ligature with threads. He forbore to dilate on those elements that were beyond the surgeon's skill—the constitution of a patient and external influences—hostile to the healing of wounds by primary union.

Gentlemen would remember that some ten or fifteen years ago the metallic suture was heralded as something so transcendently perfect that the old, honest silk thread could have no more standing in the surgical art. Surgeons were decidedly voted old fogies that still clung to it. And yet now we all confess that many times the metallic suture cuts as quickly through the parts to be kept in contact as the silk, that we get as good linear cicatrices with the silk suture as with the metallic one. If Sims, Emmet, and Bozeman could point to their marvellous success in healing vesico-vaginal fistulas, their merit lay more in their skill and in the perfection of the method in all its details, than in the use of the silver wire. Prof. Gustav Simon, now in Heidelberg, had no inferior success in the same operation than the American surgeons, although using the silk thread. Not only was the metallic suture not better than the silk suture in many cases, but in many instances it was inferior. He would maintain, without fearing contradiction, that, for example, in plastic surgery of the face, experienced surgeons would give the preference to the silk sutures.

What he had just remarked of the two kinds of sutures seemed to him to be a good analogon in forming an opinion of the relative merits of acupressure and ligature. Acupressure was now riding on top of the wave of surgical favor. He had no idea that, like many new things, its success would be only ephemeral. But a few years' experience would probably show that ligature, now being in danger of almost being driven from the field, would repossess itself of part at least of what it once had held exclusively, and wherein it would maintain itself as better suited than acupressure.

Dr. HUTCHINSON desired to place himself upon record regarding the use of ligatures, inasmuch as, in a recent number of the *Buffalo Medical and Surgical Journal*, the views he expressed at the meeting of the State Medical Society had been misunderstood. Although he had not used it in practice for two years, he did not mean to convey the idea that he should never resort to it. He could conceive readily of certain contingencies in wounds, or certain character of wounds, where acupressure could not be applied as readily as the ligature.

As regards the application of pressure to the continuity of arteries by means of special instruments, such as forceps, clamps, etc., he would remark, that it is nothing but a modification of the principle of acupressure, and should be regarded as such.

Dr. James L. Little expressed his preference for the use of the long needles. They were more advantageous than the needles armed with wire, and could be withdrawn with vastly greater ease, and less danger of lighting up hæmorrhage or disturbing the surrounding soft parts. When the wire is used, care should be taken to have both ends of exactly the same length, and uniformly and evenly twisted throughout the entire length. In a case at St. Luke's Hospital, a few days ago, where he had used the needles and wire, a neglect of this precaution had given rise to considerable trouble and some laceration of the wound by the jagged end of the wire drawing through the soft parts. He attached special value to the fifth method as described by Dr. Peters, though he had also used quite largely the fourth method, and with excellent success.

Dr. Buck called attention to a case recently occurring at the New York Hospital, under the care of Dr. Krackowizer, which showed very positively the advantages resulting from the application of acupressure by way of anticipating or warding off hæmorrhage. It was a tumor of the lower jaw, the removal of which involved the loss of the entire half of the jaw, and, as the patient was very feeble and anæmic, it was questionable whether it was wise to undertake the operation, as the loss of even a small quantity of blood might turn the scale unfavorably. The operation being finally decided on, the common carotid artery was laid bare just below its bifurcation, and a stout thread ligature was passed around it. The canula previously spoken of this evening was then passed over the two ends of the ligature down to the artery, and the ends tied over the outer end of the canula. In this way the operation was performed with a very trifling loss of blood. It had occurred to him that this use of the double canula and ligature would prove a most efficacious means of securing the pedicle of ovarian tumors in the operation of ovariotomy. A stout cord, say a common linen fish-line, could be used, and it would not require to be kept applied to the pedicle more than 48 hours. Then, by loosening the cord and canula, they could easily be withdrawn, and no foreign body would be left enclosed within the cavity of the peritonæum. It seemed to him that this method would prove quite as reliable as the use of many of the clamps, etc., now in vogue, some of which are so formidable in appearance as to cause him to shudder when he thought of their application.

Dr. Peaslee remarked that the same idea had occurred to him, but there were certain objections to the method, which he deemed insuperable. The ligature could not in this way be applied with any degree of precision, on account of the very varied form of the pedicle of such tumors, and again we could never be sure that the ligature thus adjusted would not slip from its hold. Another method of loosing and removal of the ligature had suggested itself to him, but it would be premature now to say any thing of it, as its true value must first be learned. As soon as he had opportunity to try it, he would lay the results before the society.

Dr. Buck replied that the objection as to the tightness of the application of the ligature could be easily overcome, for he had applied a tourniquet mechanism to the end of the canula, and thus any degree of tension that a ligature would stand might be applied, and if with this there was believed to be any danger of slipping, the ligature could easily enough be passed through the investing tissues of the pedicle by means of a needle, and thus held firmly in position.

Dr. B. Howard said that the highest result we could hope to attain was, to secure occlusion of the arteries without introducing any obstruction to healing by first intention. That this had been done in stumps and wounds by acupressure was undeniable, but, in the continuity of arteries, acupressure was far more difficult of application, and in some regions was perhaps impossible. In such cases, certainly if not in others, some other method, more convenient of application and answering the same ends, should be adopted.

With regard to the use of a canula as described by Dr. Buck, and as used by others, where the object was the permanent closure of an artery, was it justifiable to apply a ligature by such means with the intention of subsequently removing it, and that, too, possibly, as had several times occurred in this city, by a second operation for that purpose?

He had recently seen a case in which a ligature, applied through a canula tightly enough to arrest the arterial current, had become subsequently loosened, and he knew the attempt to tighten it had justly caused the surgeon very serious apprehension. Moreover, instead of allowing healing by first intention, the wound he saw was simply a well, the canula serving as a metallic air-shaft down to its bottom, which was the artery, upon which, of course, the weight of the canula rested. From the surface of this well, as one might anticipate, pus was overflowing, and the mouth of the double canula or shaft indicated by its vertical motions the pulsations of the femoral artery upon which it rested. It was hardly a question whether the application or the removal of the canula and ligature was attended with the greater danger. Consequently the operation was doubled, and the risk more than doubled, from the additional dangers incident to the secondary character of the operation for removal. He did not wish to appear too frequently as the advocate of silver-wire ligatures, but he had demonstrated that they could be applied so loosely as to do no danger to the artery, secure its occlusion, and as certainly be followed by healing completely by first intention. He thought this method could be applied where acupressure could not be, and, even unlike acupressure, it called for no subsequent disturbance whatever. Why should we not try more fully a method which promised all we desire, with freedom from all we would avoid?

Reviews.

Art. I.—*On Chronic Bronchitis, especially as connected with Gout, Emphysema, and Diseases of the Heart.* Being Clinical Lectures delivered at the Middlesex Hospital. By E. Headlam Greenhow, M. D., etc., etc. Philadelphia: Lindsay & Blakiston, 1869. Post 8vo., pp. 236.

The chief aim of these lectures is to call attention to, and to demonstrate, the intimate connections between chronic bronchitis and certain constitutional and local conditions. Dr. Greenhow has well utilized the out-patient department of his hospital, it furnishing him with the illustrative cases, which are those of every-day practice, and are full of clinical instruction.

To bring the several relations of bronchitis and other ailments before the reader, Dr. Greenhow has made an analysis of ninety-six cases—fifty-five males and forty-one females—three-fourths of the number being between the ages of twenty and fifty, all cases of strictly senile bronchitis, or that form incident to advanced life, and due to natural tissue changes, having been excluded. These were studied with reference to—1. The duration of the disease. 2. The influence of season on its accessions. 3. The previous history of the patients as regarded other diseases, or exciting causes. 4. The existence of an hereditary tendency to any form of dyscrasia. 5. Actually existing complications. Among the class of persons who furnish these observations, trustworthy reports of previous health are difficult to get, and the same may be said of reliable facts of family history. The ailments actually complicating each individual at the time of coming under treatment can always be appreciated.

Dr. Greenhow, fully assured of the views he holds, says:

> "I am satisfied, from long personal experience, that the proportion of cases of bronchitis arising from external causes is decidedly smaller, and that from gouty and other internal conditions of the system is decidedly larger, among the higher classes of patients whom we meet with in private practice, than it is among the working-classes who form the bulk of our hospital patients" (p. 14).

Again he writes:

> "You will by this time fully understand that the true relation which I believe to exist between the chronic bronchitis on the one hand, and the gout, psoriasis, albuminuria, and gravel, on the other, in all these different cases, is that they all depend upon a common humoral dyscrasia, which in one case produces gout, in another gravel, in a third psoriasis, or, as in the cases which we have been considering, bronchitis coexisting or alternating with one or more of these other ailments" (p. 112).

Of course, for the successful treatment of such cases, the presence of a constitutional cause for the local affection is to be borne in mind, and the physician's efforts are to be directed especially toward combating the dyscrasia, the real source of the ill.

The relations of vesicular emphysema and bronchitis are so constant, and they so frequently arise from a common constitutional cause, that a lecture on Emphysema is an appropriate sequel. Dr. Greenhow teaches, that when the emphysema is very partial, it is usually secondary both in origin and importance, to some other secondary lesion; if, however, it is general or extensive, it is, sometimes at least, the primary disease. With respect to the mechanism of the affection, whether the immediate agent of production is the act of inspiration or that of expiration, after quoting the several supporters of one or the other theory, he adopts that of Mendelssohn, that lungs become emphysematous from the effects of expiratory pressure, which Mr. Hutchinson's experiments with the spirometer long ago proved to be the stronger force. But Dr. Greenhow rightly remarks that any theory of the origin of chronic and extensive emphysema, which would refer it exclusively, or mainly, to mere mechanical causes, is too limited; and this brings him to the consideration of the important question whether the development of the disease, when extensive, is not generally preceded by some abnormal condition of the walls of the air-cells. The investigations by Dr. James Jackson, Jr., of Boston, some thirty-five years ago, showing its hereditary character, and which have since been confirmed by the observations of Dr. Fuller, of London, and others, strongly point to the constitutional origin of pulmonary emphysema. The results of Dr. Greenhow's personal investigations show positively inheritable liability. With respect to the specific nature of the change in the pulmonary tissue which is precedent to the development of the affection of the disease, various opinions are held. That nutritional changes first happen in the bronchial walls, leading to degenerative processes, is, we think, unquestionable; and that the stretching, and even rupture, of the cells is accessory or subsequent to the lung lesion, and is due to vital and not to exclusively mechanical causes, there can be no doubt. We believe, that, after a certain structural condition is present, the immediate dilating factors may be either the inspiratory or expiratory act, or accumulated secretions in the tubes.

Dr. Greenhow recognizes three distinct forms of general emphysema: constitutional or substantive emphysema; bronchitic emphysema; and senile emphysema.

The concluding lectures are on the Relations of Bronchitis with Diseases of the Heart. Bronchitis may stand to disease of the heart in the relation of cause or of consequence. The cardiac lesion may be primary, and be the predisposing cause of the bronchial disorder; when this is the case, its site is the left side of the heart. When the heart-disease follows bronchitis or emphysema, the right cavities are implicated.

Dr. Greenhow has found a combination of digitalis and tincture of the chloride of iron useful in incompetence of the mitral valve, rendering the pulse more regular, and of better volume, and, where there has been dyspnœa, making the patient more comfortable. Until recently digitalis has been regarded as a cardiac sedative; lately there are many who hold that its action on the heart is that of a tonic. Founded as both views are on clinical experience, they may seem irreconcilable; but the difficulty lessens when we come to examine the subject carefully by the lights of physiological research. The experiments of Drs. Handfield Jones and Fuller show that, in death from digitalis-poisoning, the heart is in a state of tonic contraction. Clinical observations teach also, when the sounds are almost inaudible, with a weak pulse, that, under the use of the drug, the beating becomes palpable, the sounds distinct, and the pulse more regular and full. Dr. J. Milner Fothergill, in a late number of the *Edinburgh Medical Journal* (April, 1869), has attempted to lay down the rules which should govern the use of digitalis in heart-disorders. He believes that it is indicated in cardiac debility, in valvular lesions, and in dilatation of the heart, whether simple or with hypertrophy; the thinner the muscular walls, and the weaker the contractions, the more imperatively it is demanded; while it is contraindicated in hypertrophy, and in degeneration of the muscular tissue, by causing a state of dangerous tonic contraction. The paper will bear careful reading.

Dr. T. L. Brunton, in his work on Digitalis (1868), based on experiments and observations, has much sensible matter on the tonic and regulating property of the drug. According to this writer, it stimulates the musculo-motory apparatus, not only of the heart, but of the involuntary muscles of the body generally, causing contraction of the stomach, intestines, womb, bladder, etc. It first brings about constriction of the small arteries, but this power is gradually lost, and paralysis follows. Hence its indiscriminate use in cases of weak heart, where the fibres are fatty and friable, is attended with risk, as rupture may follow.

ART. II.—*Pennsylvania Hospital Reports.* Vol. ii., 1869. Philadelphia: Lindsay & Blakiston. 8vo, pp. 320.

THIS handsomely-printed volume, like its predecessor, is chiefly made up of papers of a practical character, from observations made at the hospital. Its editors, Drs. J. M. Da Costa and William Hunt, have done their parts well in the selection of creditable articles.

On the Influence of the Weather over the Results of Surgical Operations, and of the Value of the Barometer as a guide in the choice of the time for and the prognosis in such operations, as shown by the results of immediate amputations during a period of thirty years in the hospital, by Dr. Addinell Hewson, is a valuable contribution to climatological physics. The influence of weather in connection with operative surgery seems never before to have received any especial attention. Among other facts, it would appear that all the months of the year give a mortality from pyæmia in direct ratio with evidence of their dampness, while the mortality from shock happens in a constant ratio with the dryness of the weather. The results of operations are materially controlled by the weather, the deaths, when operations were done with the barometer mounting, were not quite 11 per cent.; over 20 per cent. with it stationary; and over 28 per cent. with it falling.

Dr. Thomas G. Morton contributes a Statistical Account of the cases of Urinary Calculi operated on in the hospital from 1756 to 1868 inclusive. One hundred and twenty-four cases are recorded, an average of a little over one case for each year, or one for every 663 of the whole number (82,212) of patients treated. On 110 lithotomy was done, and on 14 lithotrity. Up to 1858, there were 96 cases of lithotomy and 14 deaths; in nearly all the gorget was used, and no anæsthetic was given. Since 1858, 15 cases and four deaths are recorded; in all there was anæsthesia. From 1832 to 1851, 35 cases were cut, and one only, a child four years old, died. Fifteen of these were five years of age and under.

A Contribution to the Therapeutics of Acute Rheumatism, based on a series of cases treated by the bromide of ammonium, by Dr. J. M. Da Costa, is carefully prepared. Thirty tabulated cases seem to warrant the writer's opinion that the action of the bromides is happy. "As regards the immunity from heart-affection," Dr. Da Costa writes, "the bromide treatment ranges itself alongside the alkaline treatment, which it seems to me to surpass in greater influence on the pain, in the healthier, less anæmic, look of the patient on recovery from the acute symptoms and the speedier convalescence."

Dr. James H. Hutchinson's paper on Intracranial Aneurism, with an observed case, and a table of thirty-three cases, will be read with interest. A large number of cases have been published in Europe, but Dr. Hutchinson has found only four reported in the American medical periodicals accessible to him; and he suggests that the small number of recorded cases in this country may be due, not to the infrequency of the disorder, but to its having been overlooked.

A Review of the treatment of Oblique Fracture of the Clavicle, with remarks on the application, with support of the adjoining limb, of pressure to the lower angle or blade of the scapula, as the ruling indication, also the suggestion for this purpose of new forms of apparatus, by Dr. Edward Hartshorne, is sound and practical.

Dr. John H. Ashhurst, Jr., writes on Excision of the Hip-Joint, with special reference to the treatment of hip-disease, and relates the "first successful case of hip-joint excision which has ever occurred in Philadelphia." A tabular view of two hundred and forty-two cases is added, which is by far the most complete yet published, and prepared with great care to illustrate some of the more important points in connection with the statistics of the operation.

Dr. John H. Packard enforces his views on the true principles of the Treatment of Fractures, and which are familiar to the readers of THE JOURNAL. The Identity of the White Corpuscles of the Blood with the Salivary Pus and Mucous Corpuscles, is the title of a communication by Dr. Joseph G. Richardson, on a subject which is at present attracting attention. Dr. J. H. Hutchinson reports the very great success which followed the hypodermic injection of the sulphate of morphia as a remedy for the excessive jactitation, restlessness, and convulsions, which so frequently attend sun-stroke. It was used as auxiliary to the ice-treatment.

Other papers of more or less value and interest are contributed by Drs. I. Forsyth Meigs, George C. Harlan, W. Hunt, James Tyson, Addinell Hewson, D. H. Agnew, etc.

ART. III.—*A Treatise on the Diseases of the Eye.* By J. SOELBERG WELLS. 4to, pp. 741. Philadelphia: Lindsay & Blakiston, 1869.

THE volume before us fully justifies the favorable expectations which were raised when its intended publication was announced. One at all familiar with ophthalmic science will appreciate the great labor involved in the performance of a task like this—a glance at the foot-notes, referring to recent treatises and journals, both English, German, French, and Italian, will show the same thing to the most superficial reader.

We congratulate Mr. Wells on the successful manner in which he has achieved his work.

It is impossible, within the limits of an ordinary review, to give a complete analysis of a book so large and embracing so many topics. The order adopted is what may be called the anatomical, commencing with the eyeball, and treating in succession the conjunctiva, the cornea, the iris, the ciliary body and sclerotic, and the lens; next, a description of the ophthalmoscope and the mode of using it is introduced. This chapter is brief, and, in most respects, sufficient; but we cannot help feeling that more ought to have been said about the value of the examination by the erect or virtual image in diagnosis of the state of refraction. While its advantages of increased magnifying power are fairly presented, and greater cultivation of this kind of examination is advocated, the best argument in its favor is scarcely noted, namely, that thus a practised observer can decide not only the kind of refraction, but can approximate closely to the degree and measure of any departures from the normal state—this being true both of hypermetropia and myopia. This omission is also felt in the section describing the way to inspect the refracting media, page 310. In speaking of how to ascertain the precise situation of an opacity in the vitreous humor, nothing is said of the choice of a convex or possibly a concave glass to enable one, with relaxed accommodation, to see it sharply, and from this glass to deduce by mathematical calculation the exact situation of the object. This has been well set forth by Mauthner and also by Knapp.

Following this topic, come in order diseases of the vitreous humor, the retina, and the optic nerve. Then comes a chapter which must have been of all others the most difficult for the author to write—upon amblyopic affections. Some lectures of Graefe are taken as a guide, and the cases grouped together are such as admit of very imperfect classification where there may be no lesion visible in the fundus oculi, or simply those of atrophy or inflammation of the optic nerve. There are impairment of sight and limitation of the visual field. The causes of these conditions are extremely various, and here is a fruitful field for the labor of future cultivators. What the author has brought together is well worthy of study.

Under the head of choroidal disease, we find the information ample, coming quite down to date: disseminated choroiditis, tubercles of the choroid, rupture of the choroid, are among the points presented, and show that nothing of importance has been omitted. The chapter on glaucoma deserves eminent praise; it is clear, full, and, in the vividness of its descriptions and the polish of its sentences, might be quoted as a sample of classical English.

Upon the anomalies of refraction and accommodation the author is fully at home. He had already written on this theme, and, though nothing original is set forth, yet what is practical is stated with clearness, and for more complete theoretical discussions the reader is referred to proper authorities. Of course, the great work of Donders is constantly referred to. We are happy to notice that upon astigmatism the ingenious tables of Dr. Green, of St. Louis, are properly estimated.

Troubles of the muscular apparatus are ably dealt with; perhaps to greater length than would be thought necessary by those who simply call all cases of hypermetropia, astigmatism, and muscular insufficiency, asthenopia, but not to such as know how much delicate discrimination must be used in deciding what to do for cases of slight muscular asthenopia.

The conclusion of the book contains diseases of the lachrymal apparatus, the orbit, and eyelids.

We might select many parts for especial quotation, and have been tempted to do it. For instance, the chapter on operations for cataract digests the whole subject very well, giving the history of the various modifications which have been introduced within ten years. One suggestion emanating from this country—the use of a suture to unite the edges of the corneal wound, as done by Dr. Williams, of Boston, for flap extraction—is not mentioned. The operator's success entitled it to be noticed.

The plates and diagrams are abundant, and, when copied from other authors, the fact is properly acknowledged. Some of Liebreich's chromo-lithographs of ophthalmoscopic appearances are, by the author's special permission, appended to the book. The foot-notes are numerous, and exhibit commendable industry.

For further knowledge of the book we beg to commend our readers to get it, for they can study nothing better of its kind.

Art. IV.—*A Practical Treatise on Perimetritis and Parametritis.* By J. Matthews Duncan, Clinical Lecturer on the Diseases of Women, in the Royal Infirmary. Edinburgh: Adam & Charles Black, 1869. 8vo, pp. 249.

Dr. Duncan is known as an abundant and nimble-minded writer on obstetrics and gynecology. He is outspoken to bluntness, and has no great reverence for the past; indeed, he is decidedly iconoclastic, looking upon the influence of authority and tradition in practical medicine as "lamentable and baneful," and powerfully contributing "to make it remarkable among the sciences for its imperfect development and slowness of progress." Medicine, he thinks, "has still to find a Luther or a Newton." When he likes not a doctrine or a man, he does not always weigh his words, and he has one standing and ancient grievance which overtops all lesser and later ones—Archigenes. He loses no chance to indulge his grudge against him who Alexander Trallianus styled most divine—θειοτατος—Juvenal celebrates, and who Galen tells us (*De Locis Affect.* l. ii., c. 6) was learned in every thing in medicine, and that all he had written was worth reading. Some years since (1859), Sir James Simpson ventured to assert (*Medical Times and Gazette*, vol. xix.) that Archigenes had given a "full and distinct" and "concise and lucid" account of pelvic cellulitis. Dr. Duncan takes umbrage at the claim set up for the Roman physician by his Edinburgh *confrère*, for fulness and distinctness, and while owning that his remarks concerning pelvic abscess are "curious and interesting," they are yet "so scanty and bald as scarcely to give us more than some suspicion of what he was intending to speak about," and looks upon it as an amusing specimen of the pathology as well as the therapeutical wisdom of the ancients.

The truth is, that whatever glimpses of the affections in question there may have been in bygone times, their scientific study has been a conquest of our own day. Récamier had a dim notion of them, and Lisfranc treated of them as part and parcel of uterine congestion; but it was Nonat first, and Bernutz afterward, who gave them form and being. It is, however, just to the memory of a great name to say, that thirty years ago Chomel, in his clinical lectures at La Charité, was accustomed to state all the main diagnostic points of metro-peritonitis: the immobility and deviation of the womb, the resistance, inequalities, and soreness on touch, of both vaginal culs-de-sac, and the necessity of bi-manual exploration, as well as conjoined rectal and vaginal examination, to ascertain the extent of the tumor, its mobility, and its relations to the uterus; he recognized both their puerperal and non-puerperal origin; he distinguished metro-peritonitis from phlegmon of the broad ligaments, noted that the latter did not always suppurate, and indicated distinctly the various outlets it seeks when it passes into abscess.

Dr. Duncan complains that our knowledge of these diseases is not satisfactory or complete in a single respect; he goes so far as to say that their study has not arrived even at a "sound elementary condition of scientific progress;" and that the foundations of our knowledge concerning them have not yet been laid. "No doubt a vast collection of observations and opinions has been made, but, though valuable, they are yet in a chaotic state, like the rubbish accumulated by laborers for the production of the future architectural work" (p. 8). Now, the rubbish is really in this kind of talk, and there is nothing in the volume to show, if these extravagant, and, as we think, unfounded, statements were true, that its author has reared "from his observation and research a pretty well-arranged mass of knowledge." Indeed, the work is unworthy of his reputation. It bears marks of hasty composition; is diffuse and confused; contentious and querulous; with much fluent acrimony toward other writers; and does not add a jot to our knowledge of the maladies treated of. In a preface, to the tone and temper of which no exception can be taken, Dr. Duncan frankly says, that "the opinions he entertains are very far from being regarded by himself as final. On the contrary, he expects to have to modify them on every side, and it will afford him pleasure to do so; his aim at present being merely to lay down, for himself and others, an advanced stepping-stone to more thorough intelligence of a great matter." Then why so much intolerance to others, and their opinions? Besides, we doubt if the advanced stepping-stone has been laid down by him. Dr. Duncan states that it is to Virchow he is indebted for the suggestion of the chief terms he uses—*perimetritis*, meaning strictly inflammation of the uterine peritonæum; and *parametritis*, meaning inflammation of the cellular tissue in connection with the uterus. We think that Scanzoni used the term *perimetritis* before Virchow, at all events, long before Dr. Duncan, and with much greater precision, for our author uses these terms "without always employing, by such use, a meaning exclusively and properly uterine, but implicating also the tubes and ovaries."

Concerning the causation of these diseases, inflammation and abscess, in connection with disease of the uterus and its appendages, the theory on which Dr. Duncan insists is:

> "That these inflammations are all secondary, that they are produced by inflammation of the uterus, or of the tubes, or of the ovaries, or by noxious discharges through or from the tubes of the ovaries, or by mechanical injury. Without one or other of these causes, this inflammation and abscess is not observed. Of all the prolific causes, inflammation of the mucous membrane of the womb is, in my opinion, the most common, and this both in the puerperal and non-puerperal states.
>
> "Taking, for the nonce, the uterus as representing the internal generative organs as a whole, I may state the theory as follows, with a view to showing how time and research have, as it were, run the disease to earth: It is not a metastasis of milk. It is not an iliac engorgement or abscess. It is not simply pelvic abscess. It is not simply intrapelvic abscess. It is not inflammation or abscess of the broad ligaments. It is the consequence of inflammatory or other diseases of the uterus, tubes, and ovaries. To be still more incisive [precisive?], it is most frequently a consequence of endometritis" (p. 33).

When the disease is not post-puerperal, and this happens more frequently than is generally admitted, we doubt much the correctness of the last postulate, and believe that its origin is more frequently strictly ovarian.

We do not intend at this time to discuss the pathogeny ot these disorders, or criticise Dr. Duncan's vicarious theories. Referring to the diacritic symptoms of perimetric and parametric inflammation and abscess, he quotes "the differentiation" given by Dr. Thomas in his work on "Diseases of Women," and remarks on it:

"The quotation just made will serve to show the difficulty involved in the diagnosis attempted; for, in the whole list of distinctions, there is scarcely more than one which is not a mere general assertion, and most of them cannot be brought to the bedside and applied to an individual case. Further, for my own part, I am disposed to contest most of them entirely, while there is not one which I could not assent to without several important conditions superadded" (p. 199).

In giving his views as to the treatment of perimetritis and parametritis, Dr. Duncan limits himself to a brief account of appliances he himself uses. He adds, with a fling at his ancient antipathy:

"In our day, as in older times, we may justly estimate an author's ignorance of a disease by the amount and variety of the therapeutic means he recommends. But if an Archigenes may be excused on the plea of ignorance, not only of medical science, but of scientific methods, a modern cannot be allowed thus to conceal his shallowness, or cloak his sins. An ancient may, without stain to his fame, recommend a farrago of medicines for one disease; but a modern who does so is as foolish or as false as he who has one medicine for all diseases" (p. 213).

We see nothing novel or striking in this mode of treatment; it is, in fact, the stereotype one we find in all the systematic treatises, including gray and Dover's powders, and blue-pill, and solid opium, used in the earlier stages, "so far as to keep the mouth showing the smallest amount of distinct hydrargyrismus." This may be therapeutic simplicity, but it does not strike us as an "advanced stepping-stone" in therapeutics.

In conclusion, we quote with pleasure the following remarks of Dr. Duncan, embodying views which we have had occasion to urge in this Journal. After observing that "gynecology exhibits at present a very rapid and active growth of theories and treatments worthy of the dark ages," he adds:

"Foolish and unscrupulous men have a peculiar tendency, easily accounted for, to cultivate the diseases of the sexual organs. And the history of the progress of gynecology in our day would, if truly given, cast as much disgrace on some individuals as honor upon others. Fortunately, its worst side will probably never be thoroughly exposed; for the fittest of fates—oblivion—awaits much that is now vaunted; the discovery and diligent treatment of diseases which do not exist; the use of treatments the danger of which is greater than that of the diseases; the recommendation of remedies and operations regarding which little more is known than their names; the facile juggling with remedies of which it is the one sufficient recommendation to have a new name; the systematic concealment of disasters resulting from such treatments. These evils, rife in our day . . . . great progress is certainly being made; but 'blinding dust' is the chief result of many of its most notorious if not famous promoters" (p. 215).

ART. V.—*A Treatise on the Diseases of Infancy and Childhood.* By J. LEWIS SMITH, M. D.

No previous American book can claim to represent the present condition of infantile pathology and therapeutics; and repeated furbishings of English treatises have still left much undone. Our own periodical literature has been singularly barren of reliable data in these departments; and Dr. Smith deserves praise for having culled out what was to be found, and combining therewith the substance of the later English and some of the Continental works, but especially for the assiduity with which he is known to have prosecuted years of study in the midst of opportunities and abundance of material, which must have enabled him to avoid useless theories in the presence of a multitude of facts; so that, when he speaks for himself, it need not be with a doubtful tone.

His book does not touch more than here and there upon the domain of infantile surgery—which, indeed, has been well considered by recent monographs and special treatises; but the strictly medical department is large enough to satisfy the physician, and Dr. Smith has taken into careful consideration most of the ordinary disorders of that age.

True, we miss the usual chapter on general tuberculosis, but it is by no means forgotten when treating of meningitis.

It is to be regretted that Dr. Smith's acknowledged conversancy with infantile pathology has not suggested to him a more definitive name than "spurious hydrocephalus," and a way to clear up the confusion into which the older writers fell when treating of symptoms described under this title.

Probably a large share of Dr. Smith's pathological material has passed under the scrutiny of the Pathological Society, where one would suppose the claims of a specimen could be determined; it seems, then, surprising to see marked as "uncertain" a fatal case of rectal invagination from the proceedings of that Society—Case 50 of his Appendix C.

The popular, though unscientific belief in the decided influence of mental impressions upon the formative processes is introduced with a number of loose opinions and a story prettily told by way of illustration, but those who have been at the most trouble to investigate this exceedingly interesting question are more than doubtful; yet the inculcation of a regard for wholesome exercise and healthy thoughts cannot but be useful to the pregnant woman.

That the physician has the power to prevent small-pox —perhaps to "stamp it out," as Sir J. Y. Simpson proposes— is too broadly assumed, as Trousseau has concisely put it in his opening remarks on variola.

Many useful observations from Donné and Routh are given when treating of lactation; but it must be exceedingly rare that a child draws from a fissured nipple sufficient blood to disturb its digestion.

The rachitical disorders of infancy are neither indexed nor more than hinted at, and the diseases of the umbilicus are mentioned only as they are concerned in erysipelas or tetanus.

We had hoped to find some notice of the well-marked periodicity which is observed in many cases of pertussis, but it seems not to have attracted the author's attention.

But, besides the omissions which the size of the book may excuse, Dr. Smith has done a good thing in getting up a handy American book full of sound practical advice upon the study and treatment of the infantile disorders which usually meet us in practice.

Bibliographical and Literary Notes.

In 1860, the Managers of the Pennsylvania Hospital, realizing the importance of an Anatomical and Pathological Museum in connection with that institution, provided for the formation and maintenance of one. Since that time about five hundred and fifty valuable specimens have been collected and arranged.[1] More than one-half of these were obtained and prepared by the first curator and pathologist, Dr. Thomas G. Morton. His successor, Dr. William Pepper, emulates his zeal.

Of these two little books,[2] the first is published by a drug firm, apparently to aid them in vending their own preparations. The second[3] professes to give, in the compass of a volume which may be conveniently carried in the waistcoat pocket, the doses and uses of the principal articles of the materia medica, and their officinal preparations, a variety of important tables, including one of poisons and antidotes, and another of symptomatology, together with outlines of general pathology and therapeutics. The value of information so condensed can readily be estimated.

Messrs. Lindsay & Blakiston promise a large list of new medical works, viz.: Andrews's Hand-Book of Medicine; Trousseau's Clinical Medicine, vol. ii.; Marsden on Cancer; Squire's Pharmacopœias of the London Hospitals; Medicine in Modern Times; Harley's Old Vegetable Narcotics; Meigs on the Diseases of Children; The Physician's Visiting List for 1870.

---

[1] Descriptive Catalogue of the Pathological Museum of the Pennsylvania Hospital. By William Pepper, M. D., Curator and Pathologist, etc. Published by the Board of Managers. Philadelphia: 1869. 8vo, pp. 119 and 19.

[2] Physician's Medical Compend, and Pharmaceutical Formulæ. Compiled by Edward H. Hance, Philadelphia. Published by Hance, Griffith & Co., 1868.

[3] The Physician's Dose and Symptom Book. Eighth edition. Lindsay & Blakiston, 1868.

DR. HERMAN BEIGEL has published in London, house of Renshaw, a work on the Human Hair: its Structure, Growth, Diseases, and their Treatment.

A JOURNAL OF PARASITOLOGY, to be edited by Prof. Hallier, of Jena, is announced. The editor invites the assistance of observers in all parts of the world. The original papers will appear in the author's own language, whether German, French, Italian, or English. The journal is to be a bi-monthly, and is to consist of eighteen to twenty sheets, each number to contain six plates.

AMONG the announcements in our foreign exchanges, we notice the following: "Traité des Tumeurs. Par Paul Broca, Professeur de Clinique Chirurgicale à la Faculté de Médecine de Paris." "De l'Importance Sociale de l'Hygiène de la première Enfance—Discours lu devant l'Assemblée générale de la Société protectrice de l'Enfance, 1869. Par le Docteur E. Dally. Paris." "De quelques Symptômes viscéraux et en particulier des Symptômes laryngo-bronchiques de l'Ataxie locomotrice progressive. Paris." "De la Resection de l'Articulation Coxo-femorale par Carie, par le Docteur Good, Ex-chirurgien de l'Armée Confédérée d'Amérique." "Introduction à l'Étude de l'Ulcère Simple, par J. Auzilhon, Aide Anatomiste de la Faculté de Médecine de Montpellier. Ouvrage couronné par la Société de Médecine et de Chirurgie pratique. Paris, 1869."

BOOKS AND PAMPHLETS RECEIVED.—Constitution and By-Laws of the Medical Society of the City of Wheeling and County of Ohio. Pamphlet.

On the Treatment of Paralysis by Electrization, with an Explanation of a new Galvanic Apparatus, by A. D. Rockwell, M. D. Pamphlet, pp. 14. (From the author.)

This paper was read before the New York Academy of Medicine, November 19, 1868.

Valedictory Address to the Graduating Class of the School of Medicine of the University of Maryland, delivered March 3, 1869, by S. T. Wallis. Pamphlet, pp. 27.

Introductory Address delivered before the Class of the Medical College of Ohio, October 6, 1868, by Theophilus Parvin, M. D., Prof. of Diseases of Women. Pamphlet, pp. 32. (From the author.)

The theme of Prof. Parvin's address is "The Subjective Utility of Medicine." It is pervaded by a manly sentiment, and ennobling, elevating tone, and one cannot read it without indulging a loftier aspiration for his own improvement, a nobler pride in his chosen profession—the tendency of which, rightly considered, is to advance men in "knowledge, virtue, and enjoyment in the contemplation of the beautiful—the trinity of the soul's need."

Twentieth Annual Announcement of the Woman's Medical College, 1869–'70.

Die Addison'sche Krankheit. Eine Monographie von Dr. H. Averbeck, Praktischem Arztze, in Bremen. Erlangen. Verlag von Ferdinand Enke, 1869, pp. 114. [From the author.]

A Practical Manual of the Treatment of Club-Foot. By Lewis A. Sayre, M. D., Prof., etc. New York: D. Appleton & Co., 1869, pp. 91.

Proceedings of the State Medical Society of Michigan, for the years 1867 and 1868. Detroit, 1869.

On Varicose Disease of the lower Extremities and its Allied Disorders; Skin Discoloration; Induration, and Ulcer; being the Lettsomian Lectures delivered before the Medical Society of London, in 1867. By John Gay, F. R. C. S., etc. London: John Churchill & Sons, 1868. [From the author.]

Reports on the Progress of Medicine.

DERMATOLOGY.

Prepared by E. L. KEYES, M. D.

DERMATOLOGICAL JOURNALS.

1.—*Journal of Cutaneous Medicine.*—The learned editor of this journal still continues his efforts at a reformation in the terminology of cutaneous medicine. His task is a worthy one, but, whether the medical public will be impressed enough to hear and obey, and whether more good than evil will eventually come out of this possible complication of an already complicated subject, time must show. The Greek appellations are more revered by Mr. Wilson than the Latin, but usage is a stern master, and although knidosis may be a more appropriate term to express the idea of the condition now known as urticaria than this latter word, and although, strictly speaking, there may be numerous misapplications of the word elephantiasis, and although psoriasis may be entirely wrong, and lepra the only possible word proper to express the disease now known as psoriasis, and though it may be distinctly demonstrable that acne and eczema and ecchymosis ought properly all to be spelled with *k* instead of *c*, etc., etc., yet the question still is, Will truth overcome usage, and how long will it take? Activity in dermatological literature seems to be on the increase, and an American journal of cutaneous medicine is now all that remains to appear to make the list fairly full. Italy took the lead in 1866, producing the "Giornale Italiano delle Malattie Veneree e delle Pelle" by Dr. Soresina (Milan). Shortly followed the "Journal of Cutaneous Medicine," edited by Erasmus Wilson. Then followed on the 1st of January, 1869, the "Archiv für Dermatologie und Syphilis," edited by Dr. Auspitz, of Vienna, and Dr. Pick, of Prague, which journal, although promised for 1868, did not appear until 1869. Judging from the fulness of the first number, and the many interesting articles which it contains, the future of the undertaking may be at once predicated a success. This first number contains over 150 pages, of which one-sixth are devoted to syphilis.

The French journal, bearing also the date 1869, concludes the list. It is called the "Annales de Dermatologie et de Syphilographie," and is edited by Dr. Doyon. Unlike the German, in this its first number, at least, the French journal gives nearly the whole of its space to syphilis, and only a little to dermatology. There certainly is enough interest attaching to the subject to call for a dermatological journal on this side of the water. Let us hope that it will soon appear.

2.—*A case of Zoster upon a Child ten Months old.* By Dr. L. Thomas. [Archiv der Heilkunde, ix. v. p. 495, 1868.]

The case is one of perfectly well-marked characteristic herpes zoster of the right buttock, thigh, leg, and foot; and outside of the interest attaching to the case from its occurring at so early an age, it is noteworthy that the child, neither before, during, nor after the eruption, had the slightest constitutional disturbance, nor any symptom, except the local eruption, which ran its course in ten days. There was no fever, no fretfulness, no pain, no itching at any time.

According to Hennig, zoster occurs seldom in children. Van Bärensprung, however, considers it common. He found it frequent on children one and half, one and three-quarters, two, three, four, five, etc., years old, but does not mention having seen it in the first year. Other authorities give no statistics on the subject. The author believes the disease to be infrequent in children, and concludes from this case that the fever is not a necessary accompaniment of herpes zoster, and that when it exists its cause must be searched for elsewhere than in the presence of the eruption itself.

3.—*On Herpes Zoster.* By John Duncan, M. D. [Journal of Cutaneous Medicine, II., 7, p. 241, 1868.]

Two cases are reported of elderly women in which herpes zoster and hemiplegia coincided—to say the least—both running the same course and ending together in complete recovery within the month. In the one case the herpes occupied the fourth intercostal space of the left side, and in the other the right leg. In the latter case senile dementia had been progressing for two years. Neither was the speech, nor were any of the muscles of the tongue or face, affected in either case, and, where the paralysis existed, motion was not abolished, but much interfered with.

The author feels warranted in not regarding these cases simply as coincidences of the two diseases, from the facts that in both patients the hemiplegia began and ended with the herpes, occupied the same side of the body as the eruption, and as there was no repetition of the paralysis during a subsequent observation of a year. Hemiplegia of so short a duration furthermore is rare, so that the conclusion arrived at was, that either the two stood to each other in the relation of cause and effect, or that both depended upon the same cause. Hutchinson, in his monograph on herpes, does not believe the disease to be either an exanthema or a neurosis, but thinks that it forms a class by itself, and that he who finds out exactly what it is must make at the same time a discovery in physiology.

Van Bärensprung put the seat of herpes in the ganglion, on the posterior root of the spinal nerve. Strong objections, however, can be urged against such a solution of the difficulty, and many facts go to support the view that the sympathetic and other filaments in the course of a nerve, and not the ganglion, are the source of the disease. The two hypotheses, however, do not mutually exclude each other, and the author believes that the supporters of each theory have been too exclusive in sustaining their own views. None of this, however, will account for the hemiplegia: therefore the author, in quoting from Brown-Séquard, of what may produce paralysis in the way of peripheral irritation, advances the proposition that in these cases the paralysis was reflex.

Dr. Duncan has employed the following treatment against herpes: anodynes and tonics when required, powder of starch, oxide of zinc, camphorated chalk, or belladonna locally—once slight vesication gave relief. The local application of the solid nitrate of silver seemed to shorten the duration of the disease, when applied before the vesicles appeared.

4.—*A Case of Herpes.* By Dr. H. Weckerling. [Friedberg. Archiv. der Heilkunde, II., 3, p. 34, 1868.]

The case is one of simple herpes labialis, which was preceded by two days of high fever, following chill (temperature 41.2, pulse 152), and general febrile symptoms.

The author attaches himself unreservedly to Gerhardt's theory, that the cause of this species of herpes is irritation of the nerve by pressure caused by the sudden dilatation of the artery accompanying the nerve through its narrow canal in the bone.

5.—*On the Symptomatic Value of Herpes Zoster.* By Dr. William Moore, of Dublin. [Dublin Quarterly Review, February, 1868, p. 67.]

Van Bärensprung attributes the disease to abnormal nervous irritation, the posterior roots of the spinal nerves and the spinal ganglia being primarily affected.

Kölliker describes the sensitive nerve-fibres as passing through the ganglia without being intimately connected with them. The fibres arising in the ganglia do not return to the cord, but follow along with the sensitive fibres to a peripheral distribution. The neuralgia in zoster, then, is caused by a propagation of the irritation from the ganglion to the posterior root of a spinal nerve. The latter may propagate the irritated condition through the spine to neighboring and symmetrical regions; the trophic irritation, however, is confined to one side, because no fibres go from the ganglion to the cord. Van Bärensprung quotes cases showing that peripheral irritation of a nerve containing ganglionic fibres may cause a limited eruption of herpetic vesicles.

Gerhardt accounts for facial zoster as follows: He says that facial zoster is most common in those diseases distinguished by an initial rigor and subsequent increase of temperature, and that the eruption is caused from the fact that the branches of the fifth nerve run through long, narrow, bony canals, along with small arteries, that the latter contract during the rigor, and afterward dilate, giving rise to pressure on the nerves—whence the facial zoster.

The author assumes, with Van Bärensprung, that direct irritation of the nerves is capable of producing severe inflammation in the parts to which they are distributed, which may even take the form of vesicles. Two cases are detailed of aneurism or intrathoracic tumor, in one of which the patient was harassed with boils and herpetic eruptions over the upper part of the chest and between the scapulæ, and in the other of which there was an herpetic eruption present over the chin, neck, and chest.

The author believes that the fact that pressure on nerves is capable of producing herpes may turn out to be of importance in connection with other symptoms in the diagnosis of intrathoracic tumors.

6.—*Contributions to Scleroderma.* By Dr. Paulicki, of Hamburg. [Virchow's Archiv, xliii., 2, p. 234, 1868.]

The article bearing the above title is founded upon the following case of a woman in the hospital at Hamburg:

Thirty years old and married, she had never been seriously ill. Her son, nine years old, had been in the hospital on account of an attack of impetigo, but had never suffered from scleroderma. The patient dates the commencement of her malady in 1858, at which time curious sensations were experienced during several weeks in the arms and legs. These soon departed, and were succeeded by a feeling in the face, and especially around the mouth, as if the skin were "too narrow." In May, 1859, the patient began to notice that it became daily more difficult to open the mouth, and that there was a sensation of stretching over the whole face, that the skin of the face was tighter, more shining, less movable than of old, and that the same changes were commencing in the arms, and on the breast. A difficulty in moving the arms soon established itself, so that in the autumn of the same year (1859) the elbow-joint could be no longer fully extended. The fingers soon followed suit, so that in 1860 the patient could no longer straighten them, and any forced effort to accomplish that object caused a painful tension. The lower extremities were still in good condition, and the patient's motions not impeded. Pain, with a feeling of tension and stiffness, followed in the face, elbows, and fingers. Sensation was unimpaired, and no change in the secretion of perspiration seems to have existed at this time.

After a few months, the same changes as those which had taken place above began to manifest themselves in the thighs, legs, and feet, and locomotion became gradually more and more difficult. The patient was thus more and more confined to bed, and became progressively less able to help herself as the disease advanced in the upper extremities. The hand closed and stiffened, the elbow flexed and became so rigid that it was impossible for the patient to eat without the assistance of another. The distance to which she could open her mouth gradually decreased until it became necessary to extract several teeth in the upper jaw in order to introduce food. She was confined to her bed during the greater part of the day. Ulcerations appeared upon different parts of the body, which were very painful, and called forth great complainings. These ulcerations were not deep, gave out but little pus, and after existing several weeks in one place, they would be covered by a thin glistening cicatrix, while other ulcerations would appear on other parts of the body. The ulcers were chiefly situated in the neighborhood of the joints. They did not select the places upon which the weight of the patient came while in bed, but rather such places where the skin was tightly stretched over bones near the surface. While the whole body was becoming gradually more and more compressed by the tight skin, the color of the latter remained on the whole unchanged, especially on the face, which had assumed a staring, immovable mask-like aspect. Around the small joints, especially at the fingers and where ulcerations had existed, the skin was whiter than before, and had a callous appearance. The skin over the abdomen became slightly brownish. During the first two years of the malady, the hair of the head fell out in a great measure, but afterward returned, although not so abundantly as before.

After a certain amount of unsuccessful treatment outside, the patient entered the hospital in October, 1863. At this time ulcerations existed on both elbows and on the back part of the left foot. The menses had continued regularly throughout the disease, occurring every four weeks, and lasting three or four days. The appetite was excellent, sleep undisturbed, and every function regularly performed. After the patient had been seven weeks in the hospital, she suffered from a slight attack of variola. This lasted from November 30th to December 22d. On March 3, 1864, there was a little more motion at the elbow-joints, but locomotion was impossible, on account of a tensive pain in the left thigh. The skin was tighter over the left knee than over the right; chewing was very difficult. Only fluids and very soft food could be taken. At the end of April, the mouth could be a little more widely opened. Passive motion of the joints, but especially rotation of the thigh, was painful. Painful ulcerations existed over some of the finger-joints. The skin had become a little softer and more movable in certain places, especially over the left foot and on the face. The treatment at this time consisted of ʒ ss doses of the syrup of the iodide of iron. The patient was commonly in a profuse perspiration after her warm bath, which she took regularly every other day.

Dr. Paulicki took charge of the case May, 1864, at which time the following condition existed, briefly: The skin over the whole head was thickened and as if bound down—eyelids not so much so as the rest of the face. On the forehead the patient could voluntarily produce the horizontal folds slightly, but not the vertical. The opening of the mouth was very small; four lines was the greatest extent to which the lips could be separated, nor could they be entirely closed. Patient could not distend the cheeks nor pucker the mouth. The upper-lip was slightly movable. The mucous membranes were unaltered, secretion perfectly normal, and all the special senses in good order. The features underwent no change when the patient laughed. The soft palate and œsophagus had not suffered. Very little contraction of the skin existed over the neck. Skin on the trunk was generally much stretched. The mammæ had entirely disappeared, and the intercostal spaces were invisible, but could still be felt. Cicatrices, caused by stretching of the skin in former pregnancies, were still visible on the abdomen. The color, normal on the face, was a slight brown on the trunk. The disease was more marked on the upper than on the lower extremities, most marked on the hands. The fingers were bent like claws; every natural wrinkle had disappeared. The color around the phalangeal articulations was of a sinewy whiteness. Slight motion was still possible at the metacarpo-phalangeal articulations, at the phalangeal articulations it was entirely absent. The metacarpal bone of the thumb had a motion of several lines. A pen could be held between the thumb and fore-finger of the right hand. The skin was polished, glistening, and fast adherent to the back of the hand. There was no hair upon the hand or fingers. The hand was bent toward the forearm. Slight motion at the wrist. At the elbow, small reddish spots, slight ulcerations, and scars of old ulcerations. The arms could be extended to only a little more than a right angle at the elbow. The left forefinger could by a great effort be brought to within two inches of the mouth, on the right side to within four inches. Slight motion at the shoulder in all directions. The contour of the shoulder-blade was distinctly recognizable through the skin. The feet were affected like the hands, but in a less degree. Sensibility everywhere normal. Internal organs of the thorax all normal. Pulse 72. Temperature of the axilla 29.2 R. Liver and spleen normal size. Three years later the condition was the same as above described. The skin was a little more sclerosed in places, but in other places there was a slight improvement. The mouth could be opened 5–6 lines. Pigmentation had slightly increased. Perspiration abundant after a warm bath. Sensibility normal. Sebaceous secretion of scalp diminished. Friction or stimulation of any part of the skin produced the same redness as in health. The whole body was red after a bath. The chief complaint was still about the ulcerations. Appetite excellent. Occasional short attacks of dyspnœa, quickly relieved by sinapisms. Menstruation regular. When placed upon her feet, the patient could stand and make a very few short steps. Urine normal in appearance, acid, sp. gr. 1009–1016, passed without pain or difficulty. Action of the bowels regular and normal. Temperature in axilla 28.8–29.8 R. Salt-baths were taken, the ulcerations appropriately treated, and iron the only internal medication used.

The minuteness and care with which the above case is described, added to the interest naturally belonging to it from its rarity, justify me in having reported it so much at length. The comparisons which have been made by different authors, in order to convey to the reader as nearly as possible the appearance, color, feeling, etc., of the diseased skin in cases of this nature, are curious and interesting from their variety. Thus Putégnat likens the appearance to tanned skin, Curzio to dry leather, Fuchs and Roger to parchment, Diemerbröck to a drum-head, Robert McDonnell to the rind of a smoked ham, Curzio and Eckström to wood, Zamptus and Lusitamus to the bark of a tree, Gillette to gutta-purcha, Thirial and Bouchut to the skin of a frozen body, Forget and others to cicatricial tissue, others to the skin of a mummy. Gintrac says that the muscles lie as if confined in a sheath. Helvetius, in 1678, saw a woman in Amsterdam whose skin was "smooth like marble," etc. These comparisons all point in the same direction, and taken all together they indicate pretty clearly the condition of the skin in this disease, of course making allowance for greater or less pigmentation in a given case. The skin in this disease only allows itself to be lifted up into a fold in certain places, as the neck, forearm, etc.

Autopsies, particularly those of Förster, have established that the process is one of thickening of the subcutaneous connective tissue. With this thickening goes hand in hand a sclerozing process and an absorption of the fat lying between the meshes of the connective tissue. Arning found that the elastic element of the corium, as well as the subcutaneous tissue, partook in the process and was increased. As the disease advances, the subcutaneous tissue becomes a homogeneous, fatless, callous mass, binding down the skin and destroying its usual mobility, effacing the natural wrinkles and giving the skin a hard, smooth, shining appearance. The epithelium and the papillæ remain unaltered. As for pigmentation, it usually exists in a greater or less degree in some part of the body. In Auspitz's case the greater part of the body was colored in different shades of brown, most marked upon the abdomen, the axillæ, and loins. The back was of a natural color, and the scrotum no darker than usual. The *post-mortem* microscopic examination in this case found the pigment deposited in some parts of the rete Malpighii as abundantly as in the negro. The vessels of the skin also contained flakes of pigment in their walls. Auspitz explained the pigmentation in his case by assuming that the circulation was obstructed through the sclerosed skin, that the blood consequently flowed slowly or was nearly arrested at times, and that the pigment was thus deposited by a disorganization of the coloring matter of the blood, and Auspitz believed that the extensive deposition of pigment along the walls of the vessels of the skin lent support to his theory. In Förster's case the coloring was dark brown. The microscope showed absence of pigment in those places which had been ulcerated and afterward cicatrized. In Köller's case the abdomen was brown. Mosler's case was a yellowish-brown, flecked in certain parts of the body with bright-white spots, which the patient said existed before the commencement of the disease. Upon those spots where the pigmentation was most intense, the sclerosis was least advanced; so that there does not seem to be any necessary connection between the extent of the pigmentation and the intensity of the disease. In Nordt's case (in a general way) the color was darker in front and on the abdomen and breast, decreasing toward the extremities. In Robert McDonnell's case the skin of the face looked as if it had been sunburnt. Other cases are recorded where the skin retained its color perfectly (Arning, Thirial, Guillot, Rilliet, Fuchs). Auspitz's opinion, then, as to the cause of the pigmentation, falls to the ground, inasmuch as in these cases there was as much compression and consequent impediment to the circulation as in his, but there was no pigmentation. Engel-Reimer's injections of Arning's case showed that all the vessels were open and permeable throughout; that therefore no very positive compression of the capillaries could be present in the disease. The redness also produced by sinapisms, as in the healthy skin, shows that the smaller vessels of the skin have preserved their distensibility, and can contain more or less blood, as the occasion requires. Furthermore, in the present case the pigmentation was most upon the abdomen where the sclerosis was least—the contrary of what should have obtained according to Auspitz's theory. In conclusion, then, an intensity of pigmentation is possible, but it has nothing directly to do with the sclerodermatic process; it is frequently present, just as frequently absent.

As regards the hair of the head, in this case it first fell out, and then grew again, but thinner than before. No mention is made of the hair of the head in other cases. [Rasmussen states that the growth of the hair is commonly undisturbed.—E. L. K.] No mention is usually made of the small cutaneous muscles. In the present patient, however, the phenomenon of "goose-flesh" was not observed after a bath. The nails were a little more curved and a little paler than normal; their growth was undisturbed. The epidermis appears to remain always normal (Auspitz, Förster).

In regard to sensibility, it seems generally to be undisturbed even in the most sclerosed portions of the skin. Some observers, however, positively state that it is lessened. In Förster's case sensibility at one time was lost, but returned—the skin affection meantime having improved. In Diemerbröck's case slight pricks and burns produced no sensation, but deeper ones caused pain. In Rilliet's and Eckström's cases sensibility was slightly impaired. In Mosler's case sensibility was at first diminished, but afterward became normal. The sensibility was unimpaired in the cases of Thirial, Forget, Putégnat, Gillette, Guillot, Fuchs, Arning, Grandidier, Köhler, Nordt, Auspitz, Paulicki. Perhaps hysteria had something to do with those cases where sensibility was diminished. Slightly painful tension and chilly feelings were the only reported complaints of the different patients, with (in some) pains in the joints. In several cases the mucous membrane of the mouth and tongue was invaded. In no case is loss of taste or smell reported. In one case perspiration was absent, in several deficient, but in the greater number unchanged. The sebaceous secretion is often more or less interfered with; in one case (Köhler's) the secretion was retained, forming small superficial tumors. As a rule, in females the mammary gland is greatly atrophied. The vessels seem to continue normal. Guillot has made an observation not noticed before, that it is impossible by the application of cups to get any serum through the skin in this disease. The temperature has been nearly always noticed. First it was taken by the hand, and was always reported normal or slightly lower than usual. It has never been found elevated, and when the thermometer has been used, it has always been found normal.

The affection usually commences on the upper part of the body, most commonly on the neck or face, in a circumscribed manner, and from there spreads, sometimes with very great rapidity, over the whole body. Sometimes, however, it progresses very slow, years passing away before the disease has become general. In one case of Thirial, the disease is reported to have invaded the whole body, starting from the neck, in two or three days, and in one of Rilliet's in two days. The author believes this to have been œdematous infiltration, closely followed by sclerosis. Pellissier and Fantonetti both notice this œdematous condition as preceding the true sclerosing, and Mosler relates the case of a woman, twenty-eight years old, where the disease was introduced by a "lymphatic dropsy" of the face, the upper and the lower extremities like that which forms the first stage of elephantiasis arabum.

The disease, however, seems sometimes able to extend itself over the whole body in from three to four weeks without any previous stage of anasarca. In the majority of the reported cases the whole body has been the seat of the malady; sometimes, however, it has been limited to a small portion of the skin, the rest remaining normal. The intensity of the sclerosis is never equal on all parts of the body at once. Motion is necessarily more or less interfered with in proportion to the intensity of the disease. In Bouchut's case, the hardening of the skin of the scrotum and penis rendered erection impossible.

As regards the progress and termination of the disease, in almost every case more or less improvement takes place at times, and in some cases entire recovery has been reported. As a rule, the condition of the skin remains essentially unaltered from the highest pitch to which the sclerosis has reached, until some other malady carries off the patient. The general health is, as a rule, unaltered. That the malady itself may prove fatal, the author considers improbable. Complications of other skin-diseases with sclerodermia are common. Erythematous, vesicular, pustular, papular, and squamous diseases have been observed; acne, eczema, urticaria, variola, etc., occur; ulcerations around the joints are not uncommon. Other diseases as complications are numerous, especially diseases of the heart, but these numerous diseases seem to bear no necessary connection with the condition of the skin. Only forty cases of the disease (of which thirty were female) have been as yet reported. It is most frequent between the ages of twenty-five and thirty-eight. The earliest age reported at which the disease commenced is nine, the oldest between sixty and seventy. The disease is attributed in many instances to as many different causes, prominent among which is the effect of cold. No positive etiology seems to have been established.

An external application of an ointment of the black oxide of copper, ʒ ij to the ℥ j, and iron internally, are about the only remedies for which much is claimed (although nearly every thing has been tried), and their efficacy is very hypothetical. Five autopsies have been made (Förster, Arning, Auspitz, Köhler, and Gintrac), which have shown, in brief, that, at those points where the process has reached its highest grade, the connective tissue under the skin is changed into a fatless, callous mass, and that where the disease has not gone so far the corium is thickened and an excess of elastic fibres is found.

[The author does not seem to be acquainted with the case of Dr. Vald Rasmussen, with its elaborate and satisfactory *post-mortem* and microscopic investigations, quoted at some length in the *New York Medical Journal*. July, 1868, p. 352, in the report on diseases of the skin, for the year 1867.—E. L. K.]

PARASITICAL DISEASES.

7.—*On the Diagnosis of Scabies.* By Dr. Hilton Fagge. [Lancet, April 4, 1868.]

Dr. Gull (Lancet, 1857) stated that scabies might often be diagnosticated by a microscopic examination of the detrita of the cuticle, where other means failed, and that the ova of the acarus might thus be found.

Dr. Fagge states that not only ova but also young animals in every stage of development, and the detrita of mature acari, may be found in the same way. No young male acarus has yet been discovered.

Three modes of collecting these objects for examination are mentioned:

By scraping up a cuniculus, and depositing the scraped material on the slide.

By snipping across such vesicles as are traversed by a cuniculus.

By boiling a portion of a crust in a solution of caustic soda (ʒ ss to the ℥ j), which dissolves the epithelium and renders it transparent, but leaves the ova and acari uninjured.

8.—*On the Pathology of the so-called Eczema Marginatum.* By Dr. McCall Anderson, of Glasgow. [Edinburgh Medical Journal, May, 1868, pp. 10, 11.]

The disease in question received its name from Hebra. Divergie treats of it as herpes, while in India it goes under the title of Burmese Ringworm. It commences, where the scrotum is in contact with the thigh, as a small, round patch, elevated, red and itchy—later in the disease covered, perhaps, by papules, vesicles, or crusts. The central part heals, leaving the skin discolored, while the disease advances circumferentially to the size of the palm or larger. Similar patches spring up in the neighborhood and coalesce, forming a large surface of eruption, which may extend from the knee below, and the sacrum behind, up to, the umbilicus. Minute rings of eruption may form inside the larger circles. The disease is met with almost exclusively among shoemakers and dragoons (Hebra), which the author accounts for, from the fact that these occupations bring about and keep up friction, and moisture of the parts where the disease occurs. Köbner, of Breslau, in *Virchow's Archiv* for 1864, in examining the epithelial scales taken from a case of eczema marginatum, found an abundance of spores and tubes, identical with those found in tinea circinata. Köbner inoculated himself with some of the scales on the forearm, and produced in a fortnight "three beautiful rings of tinea circinata," in the scales of which the microscope again showed the spores and tubes of the tricophyton. The conclusion is, that this so-called eczema is only a variety of tinea circinata. To fortify this conclusion the author gives two cases in detail, where the disease was well marked, and the spores abundant. Several parasiticides were used, but the author prefers the corrosive sublimate lotion (gr. ij to the ℥j), to be continued for some weeks, after the eruption has disappeared.

9.—*Observations on Area Celsi.* By Dr. Friedrich Boeck. [Virchow's Archiv, xliii., 3, 1868, p. 336.]

The above is the title of an article, somewhat lengthy, and of characteristic German fulness, in its reference to the best-recognized authorities from Hippocrates down, which in the main goes to prove, that alopecia circumscripta (or areata) is not a parasitic disease, but owes its origin to an impaired condition of nutrition in the skin, which condition looks back for its origin to some derangement in the nerves which supply the part, and that the disease is more common in patients whose general tone is lowered. Constant irritation of the affected spots, short of inflammation, if long continued and assisted by tonics internally, is the course which promises the most.

MISCELLANEOUS.

10.—*Albinismus and Nigrismus.* By Dr. Hermann Beigel. [Virchow's Archiv, xliii., 4, p. 529, 1868.]

A carpenter, aged twenty-six, suffering from progressive muscular atrophy, is the subject of the article. At sixteen the hair began to grow upon his pubes, on the right side chiefly white in color, on the left brown, the skin on both sides remaining normal. The white coloring of the hair gradually spread to the other side. On the back part of the head, also (according to the patient), a white lock existed, which afterward became black. Four years before the date of the article, the patient (who was a soldier) had been much exposed to dampness and moisture. His troubles began by a series of severe general pains, and it was now that he discovered accidentally on inspection that his breast and back were marbled in many places with large dark spots. This marbling had since in part disappeared, leaving only a few large spots of nigrismus, of dark-brown color, upon the breast and back, which were still present at the date of the article. There was no pityriasis. There was also present a stripe of albinismus, two fingers broad, running across the abdomen, which was very apparent when the patient was lying down, but invisible when he sat up, since it was concealed by a fold in the abdominal walls, when the patient was in that position. This streak of albinismus appears to have been formed by the constant contact of the two cutaneous surfaces in the fold, since the patient stated that the horizontal position at one time brought on the most fearful pains, and that he had consequently for many weeks, night and day, maintained constantly the sitting posture. The beard and mustache were of a golden yellow, and the hair and eyebrows of a dark brown.

The author considers innervation at fault in cases of albinismus and nigrismus, and remarks that the exposure which in this patient produced his disease would only have occasioned a rheumatism, had he not possessed a "nervous disposition." He states further that in nervous affections abnormalities in pigmentation are the rule, and that epileptics with a sound, normal skin are the exception. In epileptics and patients who have long suffered from dizziness, total nigrismus of the retina, revealed through the ophthalmoscope, is common. In this condition the whole retina is deep black and the vessels can only be seen by following them out from the papilla, while the latter shines out prominently and is of a beautiful white color.

A photograph of an extensive case of albinismus in the negro accompanies the article. It appears that this disease with that race, on the western coast of Africa, is common and hereditary, the individuals suffering from it being for the most part delicate subjects.

Semi-albinismus, first described by Captain Burton, is a condition existing in the negro, but not a common one. It appears as if albinismus had been in progress, but had been cut short before it had reached the stage of whiteness, leaving a *café-au-lait* tint in place of the usual white.

Pigment anomalies are divided by the author into partial and total albinismus and nigrismus, and into semi-albinismus.

11.—*On Chromidrosis; Case of Blue and Yellow Sweat.* By Dr. H. S. Purdon. [Journal of Cutaneous Medicine, II., 7, 1868, p. 247.]

The patient, forty years of age, mother of two children, had menstruated regularly up to the last six months. During the twenty years previous to the report of the case, she had suffered from several severe attacks of rheumatic gout, which had left all her small joints permanently distorted and nodose. Three years ago, during one of these rheumatic attacks, the heart had become affected. Anasarca and hydrothorax followed. A severe mucous diarrhœa relieved these symptoms, but the diarrhœa itself afterward became aggravated and threatened to terminate life. "At this time a miliary eruption appeared on the trunk, greatest at the epigastrium, from which a clear serous discharge flowed in such quantities as literally to pass through the bed." The legs were moist, but covered by no eruption. This discharge from the skin seemed to ease the patient's breathing; it ceased after a few days, and all her distressing symptoms returned; then, fourteen days afterward, a sensation of prickling was felt over the whole body for twelve hours, and the eruption and discharge again appeared and relieved the breathing. This condition of alternate relapse lasted two months, but during the latter attacks the serous discharge had changed in character, being alternately a light-blue and a yellow-straw color. Before the blue appeared, the patient observed a mouldy smell and a prickling sensation, but neither of these preceded the yellow flow. The blue always appeared along the posterior part of the trunk, and once on the front of the chest, the yellow generally on the abdomen and back of the neck. The two colors were produced from the different parts at the same time, but the discharge from the extremities has never been colored.

In place of the catamenia, there was a reddish-green discharge. The blue color faded from the bed-linen.

12.—*On the Causes of Alopecia, and of its greater Frequency in Males than Females.* By Dr. A. F. A. King. [American Journal of Medical Science, April, 1868, p. 416.]

Wilson (on Diseases of the Skin) gives it out that the cause of Alopecia, occurring in the aged, should be "sought for in an impediment to circulation through the textures of the scalp of the upper part of the head."

Dr. King endeavors to prove that this impediment is due entirely to actual compression of the arteries supplying the scalp by pressure of tight-fitting hats. The following facts are brought out to support the statement:

The male is more often bald than the female.

The male wears a hat more constantly, being more in the air.

The female bonnet does not compress the arteries.

The male hat does.

A line drawn across the head, representing the hat-rim, strikes the branches of the anterior temporal arteries over the frontal protuberance, just where the hat presses the heaviest; the posterior temporals and occipitals are compressed in the same line. On the long skull the hat presses most before and behind, and we find the baldness extending from the top, or perhaps from low down behind, from pressure on the occipitals, along to the front from pressure on the branches of the anterior and posterior temporals.

A patch of baldness on the vertex leads us to expect a wide head where the pressure has been chiefly thrown upon the posterior temporals. The little tuft or island of hair, so often left by itself on the top of the forehead, is nourished by the supraorbital arteries, these vessels escaping pressure in the slight concavity between the two frontal eminences.

Below the hat-rim the hair invariably remains.

Dr. King recommends the construction of hats (as a prophylactic measure) so as to press upon those points where the arteries are not; or, that little grooves should be made in the rim to allow the vessels to pass safely under.

13.—*Discoloration of the Skin, caused by the Internal Use of the Oxide of Silver.* By J. L. Milton. [Journal of Cutaneous Medicine, II., 5, p. 42, 1868.]

The oxide of silver was used constantly in this case—the nitrate never. The color commenced to appear after a three-years' use of the remedy (about gr. ij daily) upon those parts of the skin habitually exposed to the air, and had continued steadily to become darker up to the date of the article three years later.

14.—*Hair-Dyeing.* By Erasmus Wilson. [Journal of Cutaneous Medicine, II., 7, October, 1868, p. 330.]

The hair owes its property of dyeing to its porosity. The presence of sulphur in its constitution renders it prone to darken under the use of certain mineral substances, as, for example, lead or mercury. Red and light-colored hair contains more sulphur than dark hair, and consequently takes comparatively a deeper shade with the same solution. McCall Anderson accidentally discovered a hair-dye of this sort while treating eczema marginatum. He used a local application of bichloride of mercury for some weeks, and then changed it for a lotion of hyposulphite of soda, and the next morning found the hair of the part, which had been red, nearly black. One or two more applications made it jet black, while neither the skin nor the clothing was stained. The color remained permanent. The epidermis was not colored, because it contains no sulphur. Mr. Balmanno Squire remarks, in relation to the above case, that if, instead of the hyposulphite of soda, some more common mordant had been used, as, for example, the sulphide of ammonium, a bright-red color would have been the result. As it was, the black sulphide of mercury was formed. The sulphide of ammonium with the bichloride of mercury produces the red bisulphide. Dr. Scoffern, in the May number of the *Belgravia*, 1868 ("Cosmetics for the Hair"), states that the Persians employ indigo to produce a blue-black dye, the Turks and Egyptians a "pasty writing-ink," composed of pyrogallic acid combined with a native iron ore, while in the West metallic bodies are combined with walnut-juice. The metals chiefly used in dyeing hair are silver, lead, and arsenic; but gold, bismuth, iron, copper, cadmium, and molybdenum, are equally applicable. Lead is used most simply in the metallic comb, but as this means is a slow one, a compound of litharge and lime made into a paste with water is used more commonly. This is smeared on the head at night, an oil-silk cap is worn, and in the morning the paste is brushed out. A brown or "fusty black" is produced by making the paste with milk instead of with water.

A common lotion now in use consists of a drachm of acetate of lead with two drachms of sulphur to the half pint of water. The nitrate of silver is also used, but it has the objection of becoming iridescent on exposure to light, producing, says Dr. Scoffern, a "chromatic play of tints" which is not desirable.

Bismuth presents the same characteristics as lead. When iron is used to produce a black tint, its mordants are either pyrogallic acid or hydrosulphate of ammonia. Brown is produced by the chloride of gold alone, or by a solution of sulphate of copper with a mordant of prussiate of potash. The "golden-yellow color," of late so fashionable, is produced by a solution of arsenic with a mordant of hydrosulphate of ammonia. Cadmium would probably produce the same result. To get the lighter tints, the hair must first be bleached. This is commonly effected by a solution of one or other of the alkalies, by chlorine, by the chloride of soda or lime, or by sulphurous acid, bisulphite of magnesia or lime, or peroxide of hydrogen. In general, dyes which require mordants do not stain the epidermis.

15.—*On the Action of Arsenic on the Human System, especially in reference to its Use in Diseases of the Skin.* By Dr. Thomas Hunt. [Journal of Cutaneous Medicine, 1868, No. 6, p. 144, No. 7, p. 249, and 1869, No. 8, January, p. 350.]

The author first describes the effects of the drug given in large, medium, and small doses; then he passes to the medical aspect of the question. If a healthy individual take a small dose, say five drops of Fowler's solution three times daily for a week, at the end of this time rarely has there any sensible effect been produced. By the end of the second week, there is a slight weakness of the eyes and sometimes a slight redness of the conjunctiva. This passes off by reducing the dose a little, often without hindering the therapeutical effect. Soon the patient experiences a sense of warmth in the extremities, and a general improvement in health. A few, however, complain of disturbed rest and queer feelings. After nine or ten months the soles of the feet and palms of the hands become a little corny; sometimes the feet get tender, and in blondes pityriasis arsenicalis appears, and occasionally a few red papules come out. These results are based on observations upon more than fifteen thousand cases, some of whom took the remedy for seven years.

Arsenic is not a cumulative medicine. *Post-mortem* examinations of the tissues for arsenic have been made in cases where the individual had taken the drug constantly for months and up to within a few days of death —the latter happening from another cause—and no trace of the drug has been discovered.

Two questions present themselves: In what diseases or conditions may arsenic be expected to be useful? and how is it to be administered?

Arsenic seems to have been one of the first minerals used in medicine, and it has been employed at different times in almost every known disease. As to its applicability to skin-diseases, Dr. Hunt believes that if used perseveringly and with such adjuvants, purgatives, tonics, alteratives, or elim-

-natives as the case may require, it is not only useful but essential, and almost unexceptionably successful when properly administered in all classes of chronic idiopathic affections of the skin. To this category of course do not belong the syphilitic, ephemeral, exanthematous, nor any contagious, strumous, nor cancerous diseases. (The author does, however, include some of the distinctly parasitic diseases as being positively benefited by arsenic.) He adds that it is especially useful in those cases of skin-disease depending upon uterine irritation or irregularities. The use of arsenic is contraindicated when the skin-disease is accompanied by organic visceral disease, acute cutaneous inflammation, or a highly irritable state of the nervous system. Cachexia is another contraindication.

The author lays down four rules to be observed in the administration of the drug, and takes Fowler's solution as his standard:

1. It should be given in divided doses, three in twenty-four hours.
2. It should be diluted with pure water, perhaps combined with vinum antimonii, if the influence of antimony is required.
3. It should be taken with or immediately after a meal.
4. Five minims is enough to commence with, and this should be increased, not day by day, but from two to four weeks should be allowed to pass before the dose is increased. If inflammation of the conjunctiva set in, the remedy should not be abandoned, but reduced by a drop or two until the temporary disturbance subsides. The remedy may be continued for months. Neither mercury nor iodine should be combined with arsenic. When one preparation of arsenic loses its efficacy, another preparation of the same mineral may be substituted for it, and often with marked advantage. The action of any salt of arsenic is promoted by the use of purgatives. Young children bear arsenic very well and girls about the age of puberty generally bear and require larger doses than adults of either sex. A child one year old will require about half the dose proper for an adult.

Some patients fatten under the arsenical course, others lose flesh, generally there is no sensible change in this respect. Arsenic mixed with iron is about the best remedy for anæmic amenorrhœa and chlorosis. Fowler's solution should be used fresh. If allowed to become old, a thin film of arsenic deposits, rendering the strength doubtful. The red lavender tincture which is mixed with the solution is another objection, in that it becomes stale and nauseous, causing the patient to believe that the arsenic is making him sick. The solution made without lavender is preferable.

A solution of the chlorides, if kept in a warm place, develops an abundance of microscopic spores and filaments (which are rarely seen in water in which arsenic has not been dissolved), and which cause the solution to lose its clearness. For this reason such solutions should be kept in a cool place. A few drops of the tincture of the perchloride of iron will, however, keep the solution clear in almost any temperature.

The drug should be used with great regularity and long after the disappearance of the eruption. This course will (according to Dr. Hunt) prevent a return of the disease. During arsenical treatment the diet of the patient, as far as interfering with the action of the arsenic is concerned, is of no consequence.

16.—*On the Therapeutical Value of Oil and Water in the Treatment of Skin-Diseases.* By Dr. J. Hughes Bennett. [Practitioner, 1868, and Braithwaite.]

This article lays down the somewhat startling statement that the different ointments used in skin-diseases act only in virtue of their oil, and that the various powders mixed with fat act mechanically by thickening it, but have no therapeutical action. Thus sulphur-ointment is efficient in itch, because the sulphur makes the fat more tenaceous and causes it to fill up more readily the follicles and grooves inhabited by the insect, producing the latter's destruction by asphyxiation. In the scaly eruptions, however, especially psoriasis and lepra, pitch combined with lard is essential. The author believes pitch in these cases to work specifically. In treating favus, the author expresses entire disbelief in epilation, but believes that the parasite may be killed by keeping off the air; consequently he believes the best treatment to be, to keep the head (after having removed crusts) constantly covered with oil. As to indications for employing oil, he believes inunction to be necessary in all cases where there is extreme dryness of the skin as in prurigo, lichen, pityriasis, psoriasis, lepra, favus, etc.

The application of water, on the contrary, is indicated where the surface is excessively moist, in vesicular, pustular, or ulcerative diseases, eczema, pemphigus, herpes, impetigo, ecthyma, and rupia. The water must be applied on lint, and the part kept constantly (and this feature is essential to Dr. Bennett's plan of treatment) moist, night and day, by covering the whole with a well-fitting sheet of gutta-percha or oil-silk. The doctor usually dissolves ʒ ss of bicarbonate of soda in each pint of water, but he attributes no therapeutic action to the alkali, believing that it acts only as a solvent to crusts, etc.

17.—*Therapeutics of Alopecia Pityrodes.* By Dr. Pincus. [Virchow's Archiv, xliii., 3, p. 305, 1868.]

Dr. Pincus's laborious and interesting observations upon the natural history of alopecia pityrodes appeared in Virchow's Archiv, 1866–'67, and are given in brief in the dermatological report of the *New York Medical Journal*, 1868, page 363.

These investigations established in the main two stages for the disease, the first marked by a gradual shortening in the length of the hair, the second by a decrease in its diameter, and a preponderance of the downy over the normal hairs.

The present article is occupied in a consideration of the therapeutical aspect of the question. In order to make out as nearly as possible the physiological action of different remedies upon the healthy growth of hair, different solutions and ointments were applied by Dr. Pincus to the first and second joints of his own fingers, the application being rubbed in daily twice for about a fortnight, then once daily, each friction lasting from three to five minutes. The number of hairs in each case was counted, their different stages of development noticed, and their length noted down, the observation could thus be carried on with a perfect accuracy. The author also made experiments upon his own head, and the heads of others with healthy hair, but the difficulty of accuracy of observation upon these spots led him to found his opinions entirely upon effects produced upon the fingers.

The conclusions arrived at were—

1. There are certain therapeutical agents which are absorbed by the hair and make it brittle—to this class belong arsenic, veratrin, cantharadin, and sabina.

2. An inflammation of the hair-follicle, and of the tissue in its immediate neighborhood, impairs the growth of the hair, which impairment shows itself for several months after the inflammation has subsided. The hair produced during this period has not its normal consistence, but on the other hand the typical duration of the life of each hair is prolonged.

3. Oleum sabinæ has a peculiar influence upon the growth of the hair, in that it lessens the speed of growth, but prolongs the length of life of the hairs.

Therapeutically applied, Dr. Pincus found that, when the second stage of the disease (alopecia pityrodes) was reached, no medication could succeed in bringing back the hair to its normal condition, but the progress of the disease could be for many years retarded.

Tannin and oleum sabinæ gave the best results in the second stage of the disease. With tannin no result was obtained until the strength of the application had been brought up to ℈iv to the ℥j of ointment. Usually after eight weeks the counting of the daily loss of hair would show, that already the number of hairs which were being lost was on the decrease. The head must be washed two or three times a week with warm water and soap during this treatment.

Oleum sabinæ, 5–30 drops to the ounce, exercises a still more favorable influence against the fall of hair than does tannin, and this influence is noticeable for a longer period after the use of the remedy has been intermitted. But three evils go hand in hand with the improvement in the employment of this remedy: the hair becomes more brittle (especially dark hair); the hair and the epidermis become of a dirty gray or brown (more noticeable in light-haired individuals); and the penetrating smell, when the remedy was long employed (which, moreover, could not be disguised), produced headache, giddiness, and sleeplessness, so that, out of the eleven cases upon which it was tried, only three could continue its employment—these three, however, used it for three years, with occasional interruptions.

In the first stage of the disease only those agents are applicable which irritate the skin very slightly. In whatever part of the first stage severe irritation of the scalp was resorted to, it always produced (provided actual inflammation was not set up) an increase in the daily loss of hair, succeeded in a few days by a decrease, but followed again in a few days more by a still greater loss, which continued permanent. Bicarbonate of soda acted most favorably upon this stage. The strength of the solution should be such that its application for several minutes upon the forehead only produces a slight redness, then it is of proper strength for the less sensitive scalp. This remedy, however, unfortunately gives the hair a more or less marked reddish-brown color. From his observations the author concludes that the second stage of alopecia pityrodes can be long put off, and that, if it has already been reached, its progress can be greatly retarded by the means he has suggested.

18.—*Purpura Hemorrhagica rapidly cured by Perchloride of Iron.* By Dr. Baudon. [Bull. Gén. de Thérapeutique, February 29, 1868, p. 174.]

The patient, a girl 16 years old, menstruating irregularly, had the first crop of purpuric spots appear on October 23d. They continued coming out for several days, and when Dr. Baudon was called (October 26th) he found purpuric spots all over the body, on the tongue, the lips, the trunk, and extremities, reaching the diameter of six and eight centimetres on the thighs and legs. Pressure produced no effect upon them. The pulse was feeble, gums bleeding, and the discharges from the bowels were bloody. The patient was put upon sixteen drops a day of the solution of the perchloride of iron, increased in two days to thirty drops. The gums were washed with a mild solution of perchloride, and a course of good feeding and tonics was instituted. The results of treatment were certainly most rapid. At the end of two days the gums ceased bleeding, and there was no more blood in the rectal discharges, while at the end of seven days from the commencement of treatment (the perchloride being reduced in dose during the last few days) the patient seemed entirely restored. Pulse and heart were natural, and "the ecchymoses are effaced to such a degree, that it is only with difficulty that a trace of them can be discovered."

19.—*Sedatives in the Treatment of Eczema.* By Manis Wilson. [Journal Cutaneous Medicine, II., 5, p. 45, 1868.]

This article treats of the efficacy of opiates (or some sedative), in the treatment of some of those obstinate cases of eczema, where "nervous irritability" of the integument is a prominent feature. A case is detailed exemplifying the suggestions. Care, of course, is to be given to the regulation of the bowels during the use of the opium.

20.—*Treatment of the Itch, as conducted in Private Practice.* By A. Hardy. [Gazette des Hôpitaux, No. 84, 1868.]

Mr. Hardy employs an ointment a little less irritating than that of Helmerich. It consists of sulph. sublimat., 2 parts; potass. sub. carb., 1 part; adipis., 12 parts. After a bath before going to bed, the patient is subjected to a general friction with this ointment, and to another on the following morning, without having taken any previous bath. In the evening the patient again takes a bath to wash off the ointment, and then is treated by emollients till the irritation caused by the disease and the frictions has subsided.

21.—*Treatment of Sycosis by Nitrate of Potash.* [Journal de Chimie and Bull. Gén. de Thérapeutique, October, 1868, p. 381.]

Mr. Stewart has succeeded in curing every case of sycosis which he has encountered, by employing a simple solution of the nitrate of potash. He considers this treatment more sure and more rapid than any other, and states that cases, which had resisted other treatment for weeks, yielded in a few days to the employment of a saturated solution of the remedy in question.

It is to be applied, in a saturated watery solution, three or four times daily, over the pustules and the whole diseased surface. If the pain caused by the application is too great, the strength of the solution is to be reduced until it can be tolerated. A treatment so simple deserves at least a trial.

22.—*Treatment of Chilblains by the Perchloride of Iron.* [L'Union Médicale, No. 108, September, 1868, p. 378.]

Dr. Schaller states (Société de Méd. de Strasbourg, April) that this is the only remedy which is infallible and constant in its action. He employs a saturated solution, which he paints on (if no ulcerations exist) two or three times at night on retiring. If ulcerations are present, one application is sufficient.

The pain, it appears, produced by the remedy is severe, but its action most speedy.

On account of the pain caused by this treatment, Prof. Jeannel, of Bordeaux, proposes to replace it by the chloroxide of iron, which is more active as an astringent, but causes less immediate pain and less consecutive irritation.

Recent Publications.—The Dartrous Diathesis, or Eczema and its Allied Affections. By A. Hardy. Translated by Dr. H. G. Piffard. New York, 1868.

Des Ongles au point de vue anatomique, physiologique et pathologique. Par M. le Dr. Ancel. A. Delahaye, Paris, 1868, pp. 146.

Pathologie générale des Maladies de la Peau. Par Alphée Cazenave. Paris, A. Delahaye, 8, pp. 386. 7 francs.

Des Affections cutanées constitutionelles et de leur traitement par les eaux sulphureuses. Par Gigot-Suard. Paris, J. B. Baillière et Fils, 8, 60 pp. 1868.

Études sur les Maladies de la Peau. Traitement des dartres par la méthode expulsive. Par Felix Rochard. Paris, Plon, pp. 239.

On Diseases of the Skin, including the Exanthemata. By Ferdinand Hebra. Vol. i. Translated and edited by C. Hilton Fagge and P. H. Pye-Smith. 1868.

On Varicose Disease of the Lower Extremities and its Allied Disorders; Skin Discoloration, Induration and Ulcer; being the Lettsomian Lectures delivered before the Medical Society of London, in 1867. By John Gay. London, 1868.

On the Parasitic Affections of the Skin. By Dr. McCall Anderson. (Second edition.) London: Churchill, 1868.

A Practical Treatise upon Eczema, including its Lichenous and Impetiginous Forms. By Dr. McCall Anderson. (Second edition.)

Skin Diseases, their Description, Pathology, Diagnosis, and Treatment. By Dr. Tilbury Fox. London (second edition): Renshaw, 1869, pp. 472.

A Manual of the Diseases of the Skin. By Balmanno Squire. London: Churchill & Sons, 1868.

Seventh Annual Report of the Dispensary of Skin Diseases. Glasgow, 1868.

Third Annual Report of the Belfast Dispensary for Diseases of the Skin. 1868.

On Keloid, Scleriasis, Morphœa, and some Allied Affections; also on certain Rare Affections. By C. Hilton Fagge. Reprinted from Guy's Hospital Reports, 1868.

DISEASES OF CHILDREN.

1.—*Retention of Urine in a Child, caused by Impaction of a Calculus in the Urethra.* [Medical Press and Circular, July 29, 1868.]

This case occurred in the Dublin City Hospital, in the service of Mr. Croly. Our readers will recall a similar case reported by Dr. Lee in the *Journal* for Nov., 1867.

S. W., aged two years, a coachman's son, was carried to the hospital by its mother. Mr. Croly was in the extern prescribing-room at the time, and on inquiry ascertained that the child (who was in great agony) had not passed any urine for eighteen hours. On examination, the bladder was found to be enormously distended, and there was partial priapism; the child had been treated by warm baths, stupes, and various medicines, without relief, before coming to the hospital. The mother also stated that the child had been delicate from its birth; had convulsions, and that his water stopped three days previously, but he got relief on that occasion from a warm hip-bath. The child had congenital phymosis. Mr. Croly made a small incision with a sharp-pointed bistoury (guarded by a director, curved near the point) at the upper part of the prepuce, and was then enabled to pass a probe into the urethra, which touched a hard substance, about an inch from the orifice. The urethra was so very small that it was found necessary to enlarge the orifice; this having been done, the calculus was seized with a small urethral forceps, and extracted; the stone was the size of a pea, and consisted of lithic acid; the urine came out with a gush, to the instant relief of the little sufferer, who was kept in the child's ward until the following day.

Mr. Croly directed the attention of the pupils to this interesting case, and mentioned the causes of retention of urine in early life—congenital phymosis being the most common; he impressed on them the necessity of making a careful examination of such cases, and not adopting routine practice, which was so uselessly tried in the present instance, previously to the child's admission into hospital.

2.—*Albuminuria in a Child seven weeks old.* Reported by Dr. G. F. Helm, of Rugby. [Lancet, January 18, 1868.]

On October 3, 1866, I was called to see the infant of the Rev. C. S., aged seven weeks.

History.—Was a fine child when born, but since has been troubled with almost constant vomiting, for which every variety of food has been tried. As the mother from the first had no milk, the child has been entirely fed by hand up to this time. The different foods which have been ordered from time to time have usually remained in the stomach during the first few days of their trial; but after short interval the vomiting has returned as badly as ever, and fresh food has then been tried with a like result. No history of scarlatina or measles.

The child is a perfect skeleton, almost the most miserable object I ever beheld; lies listlessly in any position in which it may be placed; appearing not to suffer any pain; indeed, it scarcely ever cries out as with pain. I can detect no mischief in the thorax nor in the abdomen, which is soft and not distended. Head rather small; no heat of head or skin; pulse very weak and rapid; bowels open regularly every twice a day; motions said to be natural; has not passed urine for twenty-four hours. I ordered a wet-nurse, as that had not as yet been tried.

October 7th.—Nurse's milk has been rejected like every thing else in the shape of food. On testing some urine to-day, I found it pale, almost like pure water, and containing sufficient albumen to make a deposit of some height in the test-tube. To try beef-tea, and a regulated quantity of brandy in small quantities at frequent intervals.

10*th.*—No improvement. A donkey has been procured. The milk to be taken in a small quantity at a time; also ten minims of iron wine every six hours.

24*th.*—Up to this time the donkey's milk has agreed well with the child, to judge by the absence of vomiting; still no real progress is being made. The urine contains the same amount of albumen. I am unable to test the specific gravity, the urine not being procurable in sufficient quantity. Now the milk and steel wine are both rejected. Ordered to persevere with the donkey's milk and the wine; the former in very small quantities, frequently repeated.

November 4th.—Child died at 7 A. M., having taken its bottle with apparent appetite at 6.15, after which the nurse went to sleep, and on waking found the child dead by her side.

Post-mortem.—Body literally skin and bone. Head not to be examined. Lungs pale and anæmic, as indeed were all the other organs examined, excepting the kidneys, both of which showed patches of congestion, the other portions being by contrast very pale. The capsule was not adherent, neither was the substance of either kidney softer than usual. There was a general absence of blood in all the tissues, and even in the large veins scarcely any was to be found.

Remarks.—I have never seen a similar case in so young a child, neither can I find reference to any in the books to which I have access. At first I suspected that there might be some malignant disease of the kidney, looking to the extreme emaciation; though absence of any discoverable tumor in the abdomen was against that suspicion. Now I think the case must be considered as one of albuminuria from imperfect digestion and assimilation of the albuminous constituents of the food; for, though the kidneys presented some spots of congestion, they cannot be considered as diseased. The real fault probably was in the stomach, where, either from inappropriate food being supplied, or from some radical disorder in the organ itself, an imperfectly-formed albumen was manufactured, absorbed into the circulation, and then excreted by the kidneys as being worthless for all purposes of nutrition.

3.—*Trismus Nascentium, successfully treated by the Local Application of Chloroform to the Spine.* By T. L. Papin, M. D., of St. Louis. [Humboldt Medical Archives, November, 1868.]

On the 18th day of August, I delivered Mrs. O'B. of a healthy, well-developed male child of full term. Both mother and child progressed as usual until the eighth day, when the child manifested symptoms of lock-jaw, for the relief of which I ordered the following: ℞. Chloroform m. xij, spt. eth. sulph. m. xv, bicarb. sodæ gr. xij, syr. zinziber, aqua flor. aurant., āā. ʒ iv. Misce. A teaspoonful as required to allay spasmodic action, and secure rest and quiet.

After the first dose the child slept three hours, and after the second dose about two hours, after which the resulting period of rest gradually diminished, until, at the expiration of twenty-four hours, the chloroform by internal administration seemed to have entirely lost its controlling and beneficial effect. I then determined to try the local application of chloroform to the spine, as recommended by Dr. Whitehill in a former number of the *Archives.*[1]

A small strip of soft cotton cloth was moistened with the chloroform and applied to the entire length of the spine, with the effect of promptly and completely arresting the spasms, and, by renewing the application whenever there were indications of the return of a paroxysm, they were completely controlled and their recurrence prevented. Invariably upon the subsidence of the burning pain immediately incident to the application of the chloroform, the child would fall into a peaceful, quiet sleep. The application was continued in this manner for three days, when I was compelled to discontinue it for a time and apply emollients, on account of the vesication produced. During the application of the emollients, a recurrence of the paroxysms was carefully guarded against by the cautious administration of chloroform by inhalation, and the bowels were moved by the use of a mild laxative. At the expiration of forty-eight hours I reapplied the chloroform to the spine, and, alternating it with inhalation, and the emollient applications, when necessary, and occasional laxatives, continued the treatment for *fifteen days*, when I dismissed the case cured. The use of mild purgatives, at intervals of from two to three days, during the progress of the case, seemed to exert a decidedly favorable influence. Of course, attention was given to sustaining the child with nourishment.

---

[1] February, 1868, page 325, and August, 1868, page 341.

A matter of very decided interest, that I observed during the convalescence of the case, was, that the functions of the different sets of muscles were restored, pretty much in the same order as occurs in recovery from paralysis; first the feet and legs, then the spinal and intercostal muscles, next the face, then the arms, and last the fingers.

During a practice of twenty years in this city, I have seen a number of cases of this exceedingly distressing and fatal disease, and, among them all, this is the first case of which I am able to record a recovery; and I should here remark that, at one period of this case, the convulsions were as strongly developed as I have ever met with among these little sufferers. Notwithstanding all efforts to sustain him, my little patient became rapidly emaciated, and, by the time convalescence was established, was frightfully so; but he has improved much in flesh since, and is now (three weeks since his recovery, during which I have seen him twice) as healthy and bright as need be.

Upon mentioning this case to Dr. Boisliniere a few days since, he informed me that he also had a case recover, some year or more ago, under the use of chloroform. He used it, however, principally by enema, repeated as often as convulsive symptoms manifested themselves.

4.—*Belladonna in Infantile Icterus.* By J. Waring Curran, L. K. Q. C. P. I., etc. [Medical Press and Circular, September 9, 1868.]

Sir Thomas Watson, in his elaborate work on the "Practice of Medicine," states that he believes *icterus neonatorum* is not icterus at all, and has no relation to the biliary organs, but that the child, at the time of its birth, being in a hyperæmic or congested condition, presents a universally bruised appearance, which, gradually fading, gives, as the redness disappears, shades of yellow, which in a day or two pass, or are converted into the genuine flesh-color. This is all very nice in theory, but in practice, when one meets with an infant jaundiced over the surface of the body universally, the conjunctiva tinged, abdominal disturbance indicated by constant symptoms of pain, incessant crying, pressing the legs spasmodically against the abdomen, general muscular twitchings, vomiting, and discolored and fetid evacuations, one does not feel inclined to wait for the yellow tinge to pass into the normal flesh-color.

Having paid considerable attention myself to the subject, I have found that infantile icterus is of very frequent occurrence, and in many cases requires prompt remedying. In several instances which lately came under my notice, the symptoms were very severe, painful to witness, and disturbing to the entire household.

I am of opinion that the bile in these cases in not *suppressed* in its secretion, but that it is *retained*, that the liver and gall-bladder become surcharged and distended, that little, if any, bile passes through the *ductus communis choledochus*, and have reason to think that the mischief lies either in the duodenum or common bile-duct, that a spasmodic condition of these parts, from the irritation or passage of the bile through the delicate structures, is the cause of the mischief. The duct becomes spasmodically closed, the bile, instead of being eliminated as it is secreted, is blocked up in the liver, and we have reabsorption of it taking place into the blood.

A few months ago I had the opportunity of making a *post-mortem* examination of a child aged seven days, who died from an injury to the head, produced by falling from the nurse's arms. It had been previously out of health, and, from the generally tinged condition of the skin, I was induced to examine the liver. I found it preternaturally enlarged, distended with bile, and, in carefully examining the duodenum and common bile-duct, I found the duct narrowed, and the characteristic tinge made by fresh bile entirely absent. I came, then and there, to the conclusion, that the duct had been spasmodically closed during life, and thus the egress of the bile prevented.

That I have been correct in my opinion is best exemplified by the immediate relief afforded in the treatment of similar cases by tincture of belladonna in two-drop doses. After its administration, there is an end to the incessant crying, the child falls asleep, passes bile freely by the bowels, and rapidly recovers its natural state and condition. The administration of calomel I consider unnecessary and cruel. The act of secretion has gone on naturally enough. The elimination of the bile is what is required, and for this purpose tincture of belladonna will be found expeditious and curative, by overcoming the spasmodic condition of that portion of biliary apparatus so frequently affected in children a few days after birth.

5.—*Case of Perforate Umbilicus.* In the service of Mr. Marshall, of the University College Hospital, London. [Medical Times and Gazette, December 5, 1868.]

For some time past Mr. Marshall has had under his care a male child, who on admission presented the following singular condition: Projecting from the umbilicus was a tumor of the size of a large hazel-nut, of a florid red color, and perforated at its apex by an orifice from which there was a constant mucous discharge. This led into a long canal, into which a probe could be passed for some distance. The existence of a long passage in this region at once calls to mind the occurrence of persistence of the urachus, cases of which have been recorded by Boyer and others; but in this instance the probe passed backward and to one side, and not downward toward the bladder, and urine had never passed by the umbilicus. The direction of the canal, and the statement of the child's friends that fluid resembling in color and smell the contents of the intestines had occasionally exuded from the external orifice, led Mr. Marshall to diagnose the case as one of that extremely rare condition, persistence of the early connection between the umbilical vesicle and the intestine of the embryo. The red protrusion was the enlarged stump of the umbilical cord. The external opening of the canal was closed by dissecting away the mucous membrane and bringing the raw edges into close apposition. After this operation had been attended with complete success, a large portion of the umbilical tumor was removed by the galvanic cautery, a means by which the surgeon is enabled to apply to any part of the surface of the body an intense and, at the same time, a localized heat. The actual cautery, from the size of the button which is necessary for importing sufficient caloric for the purpose of cauterization, has the disadvantages of heating and causing congestion of parts not involved in the disease. Mr. Marshall, in some remarks upon this case, stated that though the external orifice of the canal might remain permanently closed, and the child be relieved of its external deformity, there would always be a risk of some contents of the intestines passing into the canal and setting up irritation and suppuration in the region of the umbilicus. In cases of abscess in the anterior wall of the abdomen, where a cherry-stone or some hard foreign body has been discharged with the pus, the inflammatory mischief is often to be attributed to the existence of an intestinal diverticulum formed, according to Meckel, by a persistence of the vitelline duct.

6.—*On the Treatment of Scarlet Fever.* By C. T. Thompson, M. D. [Lancet, February 27, 1869.]

On the very first access of the fever, I put my patient into a warm bath, and repeat this as often as the strength of the patient will allow, or the severity of the attack may require. The first effect of this treatment is to produce a soothing and refreshing feeling in the patient, to be followed soon by such an eruption on the surface, of so vivid a color and in such amount, as would astonish those who have never witnessed it. Thus one of the greatest dangers of this fearful disease—the suppression of the eruption—is escaped.

After the first or second bath the appetite usually returns, so by getting down light and nutritious food the means are afforded of supporting the strength of the patient during one of the most trying periods of the disease. By this treatment the excreta from the skin are removed as rapidly as they are deposited, doing away immediately with the source of infection, leaving no room for the dissemination of the disease. The desquamation of the cuticle is greatly promoted, it being removed in small particles, and never in large pieces.

The drying of the body after the bath is effected by soft linen cloths, sufficiently large to envelop the whole person, and with as little friction as possible; in fact, the surface is what may be called "dabbed" dry, as the excitement from friction of the skin often produces great mischief.

The irritation of internal organs is also at once relieved by this continued determination to the surface. And as the condition of the latter becomes more healthy, the nasal, renal, and alvine secretions, with those of the throat—in my opinion the most dangerous of all—are speedily deprived of their noxious properties, and quickly recover a healthy character, thus again removing additional sources of infection.

The fever rapidly subsides, and convalescence usually proceeds more or less quickly, according to the mildness or severity of the attack. Another advantage of this treatment is, that a very serious case is soon reduced to a mild one, and the patient recovers in less than half the usual time.

This practice I have pursued for more than fifteen years, during which period I have attended many cases of scarlet fever; but have never lost a single patient from this disease, nor can I call to mind at this moment any one case in which the infection has been carried from the patient to any other individual. I have had six or seven cases in a family at about one and the same time, the infection clearly traceable to schools, etc.; yet have never known the disease spread to any others in the same household. I have also attended cases where isolation was impossible, or would not be attended to, the patients having free communication with other members of the family, but, where the treatment above recommended has been scrupulously carried out, no second case has arisen.

7.—*Infantile Erysipelas treated with Hot Baths.* By Prof. H. Abelin, of Stockholm. [Journal für Kinderkrankheiten, and American Journal of Obstetrics, August, 1868.]

Erysipelas does not occur as frequently in children as in adults, but it is generally more violent and dangerous, if it originates in lying-in hospitals and orphan asylums, and affects new-born children in consequence of a puerperal or pyæmic infection, when it usually terminates fatally. The traumatic variety is comparatively slight, and yields always to a local treatment. Prof. Abelin had occasion to observe a third form of this disease, the so-called Erysipelas ambulans, in the Children's Hospital of Stockholm, which differs from the other forms especially by its tendency to spread rapidly over a large part or over the whole surface of the body, attacking successively every part without any regular order, so that, for instance, it may originate in an upper and appear in a lower extremity, without affecting the intermediate parts. The skin is always red, hot, dry, and glossy, extremely painful, and always accompanied by febrile symptoms. It occurred more frequently during the winter months. The treatment consisted first in the usual local applications, followed by tonics, especially iron and quinine. The result, however, was very unfavorable, most of the children dying, until the hot-water bath was employed, which, in addition to tonic remedies, was followed by frequent recoveries.

The following method was used: The little patient was immersed in the bath, having in the beginning a temperature of 102 degrees, which was afterward increased to 104 or 108 degrees. After remaining in the bath, according to the child's age and strength, from ten to thirty minutes, it was enveloped in a bed-sheet and then covered with a warm woollen blanket, where it remained for several hours. The heat and tension of the skin were soon diminished, the febrile symptoms disappeared, and the child generally fell into a refreshing sleep. In severe cases the bath was employed at first twice a day, in milder cases but once daily.

8.—*On the Diagnosis of Lung-Disease in Children.* By GEORGE BUCHANAN, M. D., F. R. C. P., Physician to the Children's Hospital, etc. [Medical Times and Gazette, February 15, 1868, p. 184.]

The following paper is an abstract of two lectures (the Lettsomian) delivered by Dr. Buchanan. Although somewhat lengthy for our columns, they will be found a valuable summary of the known evidences of these important diseases of childhood. These lectures are published in full in the *Lancet*, January 25, 1868, *et seq.:*

It is not possible within the compass of three lectures to treat systematically of a subject so wide as the lung-diseases of children, nor is it necessary that I should attempt any complete account of them to an audience that has examples of such diseases under its daily observation. My object will be rather to present to your consideration some of the difficulties that encounter the practitioner at the bedside—first, in regard of the recognition, and, secondly, as to the management of these disorders in the period of infancy and childhood. I propose this evening to deal with some points in the diagnosis and treatment of the *tuberculous* group of lung-diseases in children.

As evidence of the difficulty that attends the investigation of these complaints, I may state that in a single case-book of mine at the Children's Hospital, for 203 cases in which we believed that we definitely recognized consumption of the lungs, there were forty-five cases in which, on a first examination, a certain diagnosis could not be made; and a very experienced and conscientious clinical assistant of the hospital has recorded his opinion of the difficulty by setting a query against two-thirds of the cases in which he believed tubercle to be present. And I may appeal to the experience of my hearers whether they do not constantly find themselves unprepared with a positive answer to the anxious question, "Do you think the child is consumptive?"

Among the signs that have value in the phthisis of grown people, but which are absent or of equivocal signification in the child, are firstly to be mentioned the whole class of subjective sensations of which little or no account is rendered by the child; secondly, it is only in older children that expectoration of any sort is presented for our examination, and hæmoptysis, one of the first symptoms for which we inquire in the adult, is rare in children. Of the 203 cases I have mentioned, only two had spat blood at the time they came under observation. Thirdly, owing to the more acute course of the disease in early life, those symptoms which indicate softening and cavity of the lung are seldom met with. Perhaps it is for the same reason that night-sweats are uncommon in the phthisis of infancy. Next, the results of physical examination of the chest are frequently equivocal and obscure. Flattening of the chest is only noticed in the rare cases where cavity is formed, or where the lung has become adherent to the wall of the thorax. Ascultation gives but few, and—in cases of early or rapid phthisis—only uncertain results. The most reliable evidence it affords is feebleness of respiratory murmur, with more or less coarseness of sound up to actual bronchial breathing; but even this is apt to be closely simulated by echo from the child's throat. Prolonged expiration is seldom observed, but notable division of the inspiratory sound is more common. Yet the disease may be considerably advanced, and be even threatening speedy death, without other ausculatory signs of it than rhonchus more or less coarse, which would be quite explicable by bronchitis alone. Percussion, though giving more important evidence of the state of the lung, is exposed to many sources of error from which the use of this means in the adult is exempt. Unless the child be in a quite symmetrical position, without constraint of either side, it is impossible to get any valid result from percussion. At one moment the left side seems duller than the right, at another the right is duller than the left, just as the one or the other side of the chest is prevented by position from expanding so thoroughly as its fellow. In the same way, unless the two sides of the chest be examined at the same stage of the respiratory act, the results of their percussion are absolutely incomparable. There is a large class of cases in which we can establish that the essential disease is a lung affection, but where, nevertheless, we have the greatest possible difficulty in affirming or denying its tuberculous nature. It is to lobular pneumonia, and to inflammatory consolidation of the upper lobe of the lung, that this difficulty principally has reference; and it must be allowed that clinical and pathological considerations alike forbid us, in certain cases, to come to any positive conclusion on the question, even during the entire course of the disease. I shall briefly speak of what is known and believed to be known concerning the methods of coming to a decision between these lung-diseases and tubercular phthisis, reserving fuller consideration of certain points until my lecture on pneumonia and on bronchitis, with their incidents.

Lobar pneumonia in children makes exception to its ordinary definite and rapid course when the upper lobe of the lung is attacked by the disease. The exudation is then much more slowly deposited, and is also much more slowly removed; and the febrile symptoms are out of proportion, in severity and duration, to the degree of local mischief. Now, in the adult, in confessing the difficulty of separating apex-consolidation by such pneumonia from the consolidation of tubercle, we should say that the point was not of much practical moment, inasmuch as in the adult pneumonia of the upper lobe is in all probability itself of tuberculous nature. But this rule does not so certainly hold good in children; for in the young child pneumonia may have its seat in the upper lobe, without any suggestion, either in family history or in previous health, of any scrofulous or tuberculous tendency. And the disease may absolutely, though certainly slowly, pass away, and leave no physical evidence of consolidation behind—a fact which, in the minds of most pathologists, appears to be conclusive as to its non-tuberculous character. But observe how physical examination may give absolutely no assistance in determining the nature of the solidification in the lung. Intense dulness over the upper lobe, increased vocal fremitis, strong bronchophony, and loud bronchial breathing—signs which merely tell that we have a solid instead of an air-holding tissue in question—tell nothing of the nature of the process by which the consolidation has been brought about. And it may be that the general signs convey no more decisive information. The severe cough, the great restlessness, the rapid emaciation, and protracted course of pneumonia of the upper lobe, are equally present in tuberculous consolidation. But there are other cases where an opinion between the two diseases may be arrived at. Such complete consolidation of the upper lobe from tubercle will only come from the infiltrated form of the deposit, which is less common by far than the miliary sort, that gives less dulness, less bronchial respiration, and altogether slighter physical signs. Then, again, tubercular consolidation probably exhibits less definite commencement of symptoms, and has been preceded by loss of appetite, emaciation, and feverishness for some weeks or months. And of great importance, though not of conclusive significance, in diagnosing tubercle under such circumstances, is the presence or absence of the diathesis in other members of the family. I need hardly add, that the existence in other parts of the body of disease definitely ascribable to tubercle settles the diagnosis for all practical purposes. But the attention of the profession has recently been directed by Ziemssen of Greifswald to the means of distinction that are afforded by the thermometer. He finds that in lobar pneumonia, even of the apex, he gets a higher degree of febrile heat, and a smaller range of fluctuation between morning and evening temperature, than he observes in consolidation from tubercle; and his observations, very carefully conducted and recorded, point, therefore, to an element of diagnosis that should be used in the cases where other distinctions fail us, though it must be confessed that the method of examination by the thermometer in the rectum observed at regular times of each morning and evening—for except in this way no valid results were got—is not the best suited for every-day private practice.

Of the whole number of illnesses with which young children are brought to us, at least one-sixth are examples of catarrhal diseases of the lungs; and of the causes of death that carry off children under five years of age, almost that same proportion may be primarily referred to these diseases, to say nothing of the numerous instances where they are fatal as complications of other acute complaints.

The light in which I regarded the diagnosis of phthisis in the child was altogether such as we may get at the bedside. I shall ask you to regard the phenomena of bronchitis and its consequences to some extent in the light of the *post-mortem* room.

Even slight degrees of infantile bronchitis are apt to be accompanied by much pyrexia, not seldom by raucous cough, and occasionally by convulsions. But, when the smaller bronchia are affected, the course of the disease often resembles that rarer and very fatal form in the adult that we know as suffocative bronchitis, the symptoms of which are largely due to imperfect aëration of the blood. What with an adult is uncommon is with infants a very frequent course; a child who only yesterday was in perfect health is found with great dyspnœa, breathing sixty to eighty times in the minute, with pale, anxious countenance, flapping nares, and a restlessness that comes of the attempt to force a new and again a new set of muscles into the service of inspiration.

The form of bronchitis with collapse is most markedly seen in children who are rickety, and when the lung-disease occurs in the course of whooping-cough.

The mechanism by which this collapse is brought about appears to be this: A small bronchus gets its calibre reduced by the swelling of its mucous membrane and the exudation of secretion into it. The action of inspiration allows of no air passing through the obstructed tube, but drives the plug of mucus farther and farther toward the air-cells. Expiratory efforts, on the other hand, especially those of paroxysmal cough, partly because they are stronger, partly because they act from the smaller end of the tapering tube, do allow the escape of some of the air included in the pulmonary vesicles behind the affected bronchus, and thus the lobule by degrees gets empty.

Collapse, brought about in this manner by the thickening and plugging of the bronchia, may affect separate lobules, or a congeries of lobules, according as several small tubes are separately affected or a single larger one gets impervious. In the diffused form of collapse the dulness on percussion is of course slighter than when many contiguous lobuli get solidified, and bronchial respiration and bronchophony are also less marked. It is collapse due to plugging of a bronchus of some size that comes to give the closest resemblance to pneumonia, and it may even give physical signs difficult of distinction from those of lobular pneumonia.

Lobular pneumonia is always a secondary disease, either to those specific disorders which are accompanied by bronchitis almost as one of their elements (in which rank measles and whooping-cough stand obviously first), or to bronchitis of a primary kind. So far as careful *post-mortem* observation permits a generalization to be made, the course of the disease is invariably through the occurrence of collapse.

On the supervention of lobular pneumonia, it is said that the evidences of lessened volume of the thoracic cavity get less marked. In the second place, the occurrence of inflammatory infiltration of the lobules may be presumed from extension of the dulness, of the bronchial respiration, and of the mucous râles, and by the increased intensity of vocal fremitus and bronchophony (upon which Ziemssen lays chief stress if an increase in it can be established) over the affected parts; and, along with this physical evidence, increase of fever, particularly toward night. And generally there is a probability that collapse, after it has been established for two or three days, passes on to the subsequent inflammatory stages.

9.—*Strangulated Inguinal Hernia in an Infant nine weeks of age.* By C. J. Fenn, M. D., of Chicago. [Chicago Medical Journal, September 15, 1868.]

I first saw the case at eight A. M. A fine, chubby boy. Its cries were pitiable in the extreme; between intervals of a few minutes, sleep. It nursed; did not vomit; the abdomen was slightly tympanitic; the bowels had moved scantily morning and evening of the day before. The scrotum was œdematous and red; a tumor existing within the right side, oval-shaped, about an inch in its long diameter, extending along the inguinal canal. The right testicle was not perceived; over the most prominent part the swelling was a shade darker. An attempt to reduce its size by manipulation was unsuccessful; no impulse was felt over the external abdominal ring. Hot cloths were applied, and camphorated tincture of opium given in sufficient quantity to produce continued sleep.

Three hours later the hardness of the tumor was diminished, but on crying again its size was increased. Persistent efforts were now made for its reduction by means of chloroform and pressure, with partial success; twelve M. there was a small evacuation of the bowels; one P. M., the size of the tumor had been reduced one-half. There was by this time occasional vomiting of natural matter from the stomach. Digital compression was continued through the whole afternoon. The tumor was further diminished in size, but became harder, the hardness extending up the line of the cord. The child lay profoundly sleeping the rest of the day. In the night its cries became incessant. Paregoric in large doses failed to quiet.

Early the second day prostration was marked. The shade of discoloration was deeper, and the tumefaction greater. It no longer took the breast. Green matters were sometimes vomited. The features were pale and sunken, and profound sleep had come again to the child's relief. Eleven A. M. Professor Gunn operated for the strangulation. Through an incision not more than an inch and a quarter long he found a deeply-purple knuckle of intestine, filled with hardened fæces. He opened the sac, slightly enlarged the internal ring, inserted it within the abdomen, and closed the wound with three delicate sutures. The testicle was now in its proper place, appearing natural. No blood had been lost. A light compress was closely fitted, and the child placed on its back and allowed quiet. It was comfortable during the afternoon. Three or four movements of the bowels followed during the night, discharges green. At the same time it became very restless again. Paregoric was given freely.

In the morning of the third day it was quietly sleeping. Its skin was hot and dry. The wound was pale. Milk and wine were given through the day, and at night one-sixteenth of a grain of sulphate of morphia; afterward repeated.

In the morning of the fourth day it lay perfectly quiet; took nourishment as before. The wound looked healthy. In the afternoon slight convulsions were excited during a thunder-storm, and continued with little intermission for several hours. Its extremities became cold and pulseless, its respiration almost imperceptible. It afterward revived, then gradually sank, and, about noon of the fifth day, died without a struggle.

The case illustrates the danger of strangulation in congenital hernia; the exhaustion attendant upon suffering, and the fatal policy of delaying an operation when it is to become necessary.

Miscellaneous and Scientific Notes.

At the meeting of the Pathological Society, March 24th, two cases of death from chloroform were reported. One occurred at the Eye and Ear Infirmary. The patient was six years of age, and the anæsthetic was administered for the division of the internal rectus. The quantity of chloroform used did not exceed a drachm, and the child had not become fully anæsthetized when respiration ceased.

The second case was one of excision of an epithelioma of the tongue; the administration of the anæsthetic, of course, being suspended during the operation, which was long and difficult. The pulse was watched and remained good, until, just as the surgeon was about to stitch up the wound, the patient fainted, and respiration could not be restored.

To the Editor of the New York Medical Journal—

Dear Sir: In my article on "The Mechanism of the Crepitant and Subcrepitant Râles," published in the *New York Medical Journal*, No. for February, 1869, I inadvertently failed to do justice to a distinguished American author and an esteemed friend. In the work entitled "Elements of General Pathology," by Prof. Alfred Stillé, the explanation by the late Dr. Carr of the mechanism of the crepitant râle is fully adopted. This work was published several years before the publication of my treatise on the "Physical Exploration of the Chest." I was therefore in error, in appropriating whatever credit may belong to priority in adopting this explanation. My attention has just been called to the fact, and I hasten to correct the error.

Professor Stillé's work has long been out of print, and, in common with many others, I trust he may find leisure ere long to prepare a new edition. By so doing, he will add much to the many obligations under which he has placed the profession for his valuable labors in the field of medical literature.

I avail myself of this opportunity of stating, with respect to the "india-rubber sponge," that, since the publication of my article, I have repeatedly found articles in the shops which do not represent by pressure the crepitant râle. I am not prepared to explain why it is that some of the articles do and others do not give the representation of the sign. I make the statement, in order that any who may wish to procure the article for this purpose must personally select it, or have it selected after trial.

Very truly yours,

Austin Flint,
50 East Thirty-fourth Street.

Brandon, Vt., *April* 19, 1869.

Editor N. Y. Medical Journal—

Dear Sir: In the April number of the *New York Medical Journal*, page 80, after a quotation from some foreign journals, on the use of uterine injections, you very cautiously admonish young practitioners against resorting to their use.

You say: "Full dilatation of the cervix is absolutely essential."

The above statement, when taken in connection with the whole sentence, implies that great, or, as you expressed it, full dilatation must first be effected, and the sponge-tent is the thing to be feared. I am much of your opinion, and have indulged it for some time, and each additional experience only adds confirmation. I have seen the worst result (death) follow the use of the sponge-tent, and the fears of it that followed caused me to reflect upon the subject a good deal. I had long been cognizant of the fact that there are diseases, by no means rare, that demand for their cure uterine injections. And how to perform this simple operation, and at the same time rob it of its dangers, was a question that demanded a solution. Believing that the principal danger in the operation belonged to the sponge-tent, and its long contact with the sensitive tissue of the uterus, I for a time made use of sea-tangle. From this I had less irritation, and consequently less fear. Still it involved long contact, and a visit to the patient on two consecutive days, which, by-the-way, is not always convenient in the country. With these truths before me, I determined to risk an injection immediately after spreading the internal os uteri with a steel dilator made long like a pair of dressing-forceps, only that they crossed at the handles, which caused the points to separate when the handles were approximated. I had three pair manufactured, all of one size, but with different curves. The points when closed are not more than a line in breadth, or a little less than the distal extremity of Simpson's uterine sound. I first introduce a bi-valved speculum, sound the uterus to get its direction, and curve, if any exist, and with this knowledge make my selection from the dilators; pass it by the direction taken by the sound, and, when it has entered within the cervix from two and a quarter to three inches, close the handles, then open them and turn the instrument one-fourth round, then close the handles again, and, keeping them closed, withdraw the dilator at least until the extremity passes below the internal os before opening the handles. The syringe is now to be immediately introduced and the injection delivered.

I do not hesitate about using from one-half to two ounces of any of the fluid preparations in common use, at each trial. I have injected the uterus three consecutive days, and have injected the same womb as many as twenty times, and have never had any bad results since I commenced practising sudden dilatation.

I have often seen women suffer more from an application of nitrate of silver, applied to the cavity of the cervix in the solid state, than either from an injection of equal parts of Lugol's solution and water, or from equal parts of the fluid persulphate of iron and water thrown into the cavity of the body of the womb after dilatation performed in the above-described manner. I believe the principal danger from uterine injections to arise from the mode resorted to for dilating the internal os.

Yours respectfully,
A. T. WOODWARD.

MANKATO, MINN., *May* 1, 1869.

Editor N. Y. Medical Journal—

DEAR SIR: I am pleased to announce an event of some importance, concerning the medical interests of this State.

About two years before Minnesota became a State, that is, in December, 1855, a State Medical Society was organized in St. Paul, and two subsequent meetings were held, the last being at St. Anthony, in 1857. After that period the Society was allowed to languish. The rebellion broke out, and a large number of its members entered the service, and hence no meetings were held until a call was made, signed by some of its members and others, for a convention of physicians, at St. Paul, on the 2d of February, 1869.

Dr. D. H. Murphy, the Vice-President of the Society, called the meeting to order, and Dr. D. W. Hand was chosen temporary Secretary.

Dr. A. E. Ames, on behalf of the censors, proposed the names of forty physicians as duly qualified for membership—they were all accepted.

After some desultory discussion concerning the revival of the old Society or the organization of the new one, it was, by unanimous consent, resolved to reorganize.

The following physicians were recommended, and elected officers of the new Society for the ensuing year:

President—Dr. SAMUEL WILLEY, St. Paul.
Vice-President—Dr. A. E. AMES, Minneapolis.
Corresponding Secretary—Dr. A. WHARTON, St. Paul.
Recording Secretary—Dr. E. J. DAVIS, Mankato.
Treasurer—Dr. S. B. SHEARDOWN, Stockton.

Censors—Drs. J. H. MURPHY, St. Paul; N. B. HILL, Minneapolis; W. W. MAYO, Rochester; A. C. WEDGE, ALBERT LEA, and J. C. RHODES, Stillwater.

The first Tuesday in February was the time chosen for holding the annual meeting, and St. Paul selected as the place.

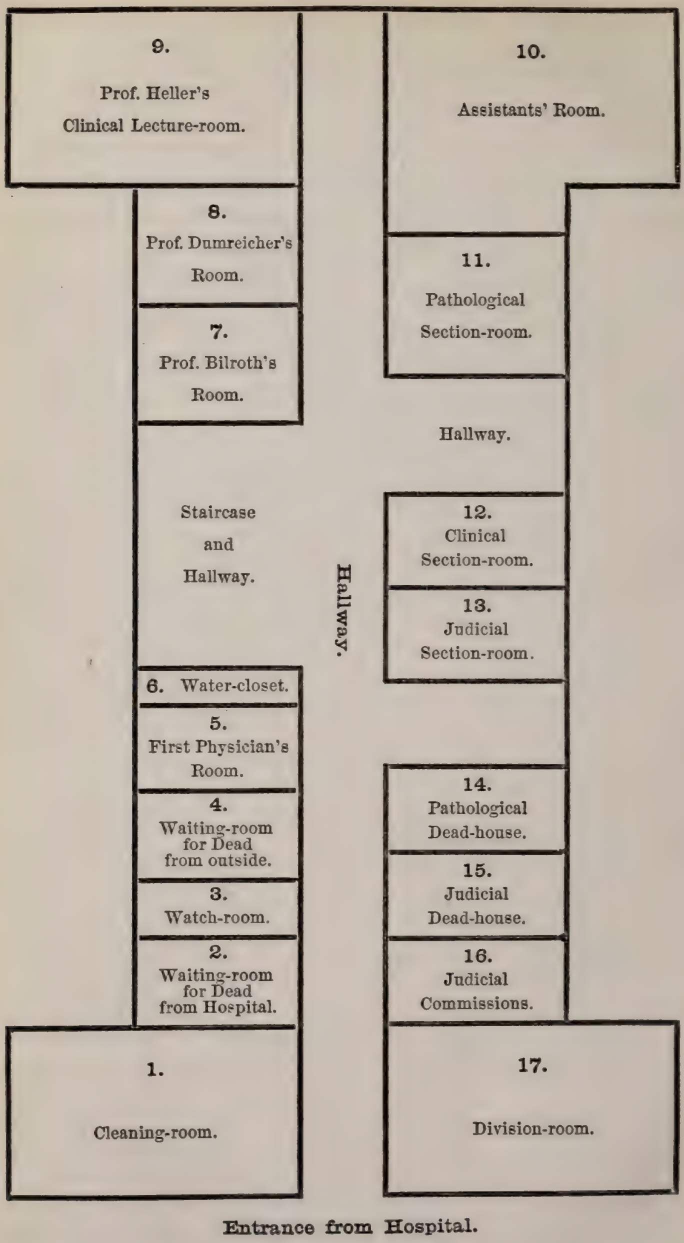
Drs. J. H. Murphy, St. Paul, C. H. Hewitt, Red Wing, and S. B. Sheardown, Stockton, were appointed delegates to the United States Medical Association.

E. J. DAVIS, *Secretary.*

Through the kindness of Prof. James R. Wood, of Bellevue Hospital, we are enabled to present to our readers a full description of the Pathological Institute of Vienna, and of the method there adopted of making autopsies. This description is in the form of a report made to Dr. Wood as chairman of the Museum Committee of Bellevue Hospital, by Dr. J. W. Southack, the Curator of the Hospital, who is now residing at Vienna, and pursuing pathological studies:

First, as regards the building itself, I must here state that it is impossible to procure any printed documents in reference to the building itself or its interior workings. To resume, it is a long, handsome three-storied building of stucco, situated in one corner of the large general hospital. On one side it faces the Spital Gasse, and on the other an enclosed court. One end abuts on the rooms of the Skin Clinic, and the other on the aforementioned court. The principal entrance is on the Spital Gasse, but this is not used, and the building is entered through a large passage-way under the skin wards.

The ground floor is a mere series of vaults where the dead lie in coffins after section, and where they are viewed by their friends. The next floor is the main one, and is on a level with the hospital grounds. As this floor is the most important, I have drawn a plan, which I enclose to aid my description. Entering, then, from the hospital, the first room on the right-hand side, the one numbered 17, is the Division-room. It is here where the death certificates are kept, and where the friends make inquiries in reference to corpses. Room numbered 16 is where the same thing takes place in reference to bodies brought from outside. Both of these rooms practically are mere lounging-places for the servants. Room 15 is where the dead from outside lie after having been 24 hours in room 4. Room 14 is where the hospital dead lie, having lain previously 24 hours in room 2. Room 13 is where the judicial post mortems are made. Room 12 is for clinical post mortem for such as are made before the class. Both the former rooms possess seats arranged in the amphitheatre form. Room 11 is where the usual post mortems are made, and it possesses no accommodations for students. All of these three post mortem rooms possess but one operating-table apiece. These tables are composed of a large marble-slab resting on a hollow iron cylinder. The slabs incline toward the centre, besides having deep grooves cut in them which run toward an opening in the centre of the slab, through which the fluids escape into a vessel placed in the aforesaid iron cylinder. Room 10 is the room belonging to Rokitansky's assistants; here the more minute


9.
Prof. Heller's
Clinical Lecture-room.
10.
Assistants' Room.
8.
Prof. Dumreicher's
Room.
11.
Pathological
Section-room.
7.
Prof. Bilroth's
Room.
Hallway.
Staircase
and
Hallway.
Hallway.
12.
Clinical
Section-room.
13.
Judicial
Section-room.
6. Water-closet.
5.
First Physician's
Room.
14.
Pathological
Dead-house.
4.
Waiting-room
for Dead
from outside.
15.
Judicial
Dead-house.
3.
Watch-room.
16.
Judicial
Commissions.
2.
Waiting-room
for Dead
from Hospital.
1.
Cleaning-room.
17.
Division-room.
Entrance from Hospital.

examinations of diseased organs are made, and here also is given microscopical instruction. Room 9 is the lecture-room of Prof. Heller, the pathological chemist. Rooms 8 and 7 are respectively the work-rooms of Prof. Dummreicher and Prof. Bilroth. Rooms 2 and 4 are respectively the waiting-rooms of those dying in and those dying outside the hospital. According to the custom here in this institute, for 24 hours after the death of a person, he is placed in a bed in one of the above-mentioned rooms, dressed, and carefully wrapped up in bed; in his hand he has placed a cord attached to a gong which he can ring in case of his reviving. Between the two rooms is room 3, the watch-room, where a person is continually on the watch in case the dead should ring for assistance. Room 1 is where the bodies are prepared for the grave after section.

On the upper floor are the chemical laboratory, pathological museum, and numerous private rooms of the different professors.

The staff of the Pathological Institute consists of Prof. Rokitansky and two assistants: first, Dr. Gustav Scheuthauer, and second, Dr. Alfred Biesiadecki, since appointed professor at Cracow. There are also four head-servants, besides four or five helpers. Two of the above head-servants have charge of the pathological sections, and also of the museum, while the other two have exclusive charge of the judicial sections. There are no printed rules which govern the post mortems, but certain established customs, handed down from time to time, are more or less strictly adhered to. First, all the judicial post mortems are made, with rare exceptions, by Prof. Rokitansky personally, the assistants, on alternate days, overseeing the others. The hour for the post mortems is 8 A. M., but they rarely commence punctually. Rokitansky's assistants generally make the post mortems personally, but, should the hospital assistant, who treated the case, desire to make the section, he is permitted to do so. This is rarely the case, and I remember, during a six months' stay, but one assistant who chose to do so, and that was Dr. Theodor Meynert, with whom the nervous system is a specialty, and whose post mortems were always on affections of that system. If the case is one of special interest, the person making the section dictates as he proceeds, and his dictations are written down by one of the assistants from the hospital; should the case be not specially marked, the diagnosis is merely written when the section is finished. This I consider to be one great fault of the proceedings here, very different from Berlin, where a full account of every case is written down from the dictation of the assistant. The full history of the case being not obligatory in Vienna, there is a tendency, when pushed for time, to slur over the post mortem in a careless and slovenly manner. I myself can personally bear witness to numbers of such cases where the section degenerated to the veriest farce.

By the strict orders of Prof. Rokitansky, no one is allowed to make a section in his shirt-sleeves, or in a gown of any sort, he must wear a coat.

As regards the mode of procedure of cutting in single cases, I am enabled to give an accurate account, as, through the kindness of Dr. Biesiadecki, I made numerous sections, under his supervision, during the month of August. Their method, when carried out, deserves the highest praise for its neatness and efficiency. Its leading idea is the examination of all organs as far as possible *in situ.* Its details are as follows: The calvarium being removed, the superior longitudinal sinus and the coverings of the brain are first examined. Then the convex surface of the hemispheres; these are now removed on a level with corpus callosum—the lateral and third ventricles are cut into; the corpora striata, optic thalami, and tubercula quadrigemina are sliced with the knife. Now for the first time is the brain removed and its base examined, lower surface of the hemispheres, medulla oblongata, and cerebellum are divided into thin slices.

An incision is made from the prominence of the thyroid cartilages to the symphysis pubis. Another incision at right angles crossing the abdomen just below the umbilicus is made, and the flaps dissected back. Sternum and attached cartilages removed in the usual manner: first, an incision is made into the thyroid gland of each side, then the larynx is opened and condition examined, nothing being disturbed from its position. The lungs, dragged out of the pleural cavities, still attached by their roots, are divided by an incision from apex to base, supplementary incisions where necessary. After their examination they are allowed to fall back in their cavities, still attached by their roots, which have been unmolested. The pericardial sac is now opened, and the heart firmly grasped in the left hand, and the intra-ventricular septum observed, an incision is now made to the right of this septum, extending from a point between the entrance of the superior and inferior cava to the apex—this discloses the right cavities and the tricuspid valves. A similar incision is made on the left of the septum, commencing at the point of entrance of the pulmonary veins, and also terminating at the apex—this exposes the left cavities and mitral valves.

The knife is again entered at the first incision and carried up in the pulmonary artery to a point beyond the valves, and then a cut is made directly outward, exposing the pulmonary semi-lunar valves; a similar incision on the left side opens the cavity of the aorta, and shows the aortic valves. As may be readily seen, the entire contents of the thoracic cavity have been examined, and their relations remain undisturbed.

In the abdominal cavity, the liver is incised in the direction of its longest diameter; other incisions if necessary. The gall-ducts are sought for, and observed to be free from obstruction by the passage of a probe; the gall-bladder is removed by tearing, and its contents squeezed out. The peritonæum divided, the kidneys are dragged up with the ureter intact; after examination, are returned to their former position. The spleen is examined in the same manner, without severing its attachments.

The stomach is now opened by the scissors along the whole length of its lesser curvature. The duodenum in the same manner. The ileo-cæcal juncture is now sought for and the intestines divided for some distance in both directions by the enterotome—their condition examined—the rectum is opened and examined in the same manner.

The bladder is incised on its anterior surface, and, in females, after the examination of the bladder, the incision is carried directly through its posterior wall into the cavity of the uterus, which is thus seen *in situ.* The other pelvic viscera are also examined *in situ.*

The spinal cord is examined after the Italian method; all the contents of the thoracic and abdominal cavities are removed. The last two lumbar vertebræ are divided by a knife passed through the intravertebral cartilage. Right and left handed chisels divide the lamina of the vertebræ, and a forceps wrenches off the anterior face of the column.

As regards the museum, there is no catalogue and the labels are merely numbered, so that any report of its contents is impossible. But I have taken a great deal of pains to learn their method of putting up their specimens, as I never saw handsomer preparations. Their method is extremely simple, and requires only two articles, water and alcohol. First, the specimen is placed in fresh water, and this water is changed when it becomes dirty. This process is continued for four or five days, the water being changed every twelve hours; a quicker and a better method is to allow a running stream of water to play on the specimen for four or five hours. This part of the process they strenuously insist on as being necessary to after-success. They say there is no fear of the specimen spoiling as long as the water is fresh. After the water-cure, the specimen is put in solution of water 80 and alcohol 20 parts. This solution is also changed every time it becomes dirty, which for the first week is about once in twenty-four hours. This process is continued until the solution is no more dirtied by the specimen, and it is then put up in the same solution permanently. Not only is this method good for fresh preparations, but I have seen some, in which putrification had already commenced, preserved and rendered white. The main thing is the frequent change of the fluid. The jars are large, wide mouthed, and possess no stopples, a piece of lead covering a skin stretched across the mouth closing the opening.

MEETING OF THE AMERICAN MEDICAL ASSOCIATION, at New Orleans, May 4–7, 1869:

The *first day* was mainly occupied by the usual formalities, and the address of the President, Dr. Baldwin.

On the *second day*, Wednesday, resolutions were offered by Dr. Gaillard, to the effect that the same rate of fees should be adopted by all the Medical Colleges of the country.

Dr. P. F. Eve presented a paper on "The Canula, and the New Mode of applying Ligatures."

A number of amendments were made to the Constitution of the Association, which we cannot report at length.

The question was raised whether the restriction in the code of ethics, with regard to consulting with irregular practitioners, was intended to apply to persons who were graduates of regular schools, and had subsequently taken up special systems of practice. The Association decided, by resolution, that such persons were included in the meaning of Art. iv., Sec. 1.

Thursday, *third day*. The election of officers for the ensuing year resulted as follows:

For President, GEORGE MENDENHALL, of Ohio.—For Vice-Presidents, WARREN STONE, of New Orleans; LEWIS A. SAYRE, of New York; F. GURNEY SMITH, of Pennsylvania; and JOHN S. MOORE, of Missouri.

Dr. N. S. Davis announced to the Association the formation of the "Association of American Medical Editors," of which Dr. Davis is the President; Dr. Mitchell, of New Orleans, Permanent Secretary, and Dr. J. B. Lindsly, of Nashville, Tenn., Assistant Secretary.

Fourth day, Friday. The resolutions, regarding college fees, mentioned above, were in effect adopted, one hundred and twenty dollars being made the minimum.

Dr. Baldwin, the retiring President, made some appropriate remarks.

The remainder of the day was occupied in an excursion down the river, and a visit to "Magnolia" Plantation. The occasion was enlivened by speeches by prominent members of the Association and others.

Judging from the comments in the *New Orleans Times*, the meeting has been successful, and the Association has made a very pleasant impression upon the citizens. We are as yet unable to give any adequate account of the scientific proceedings, as our source of information is the daily journal above mentioned.

CARE OF WOUNDED SOLDIERS—ADDRESS OF THE INTERNATIONAL CONFERENCE.—The International Conference to promote the care of the wounded in time of war, which has been in session in Berlin in April, adopted an address to the people of the United States of America. In this document, the members of the Conference expressed "regret that no representative from the United States has been present during the proceedings; but we are convinced that that great and noble nation, one of the foremost of the world, which rendered such great service in the work of humanity, sympathizes deeply with this movement." The address is signed by forty delegates, among them the Turkish ambassador to Prussia.

The Conference has ordered copies of the report of its sittings to be sent to America with the address.

AT a meeting of the medical officers of the New York Eye and Ear Infirmary, held Wednesday, April 28, 1869, the following preamble and resolutions were adopted:

Whereas, a recent railroad accident has caused the death of our late associate Dr. Orestes M. Pray, thus taking from us one of our most esteemed friends, whom we honored for his industry, talent, and professional skill, and loved for his gentleness, his modesty, and unvarying kindness, and who, in the comparatively brief period of his connection with the Ophthalmic department of the Infirmary, had established a high professional character, and had won the warm friendship of all his colleagues: therefore

Resolved, That we tender our sympathy to his family and relatives in their affliction, the suddenness and horror of which have filled us with the deepest emotions of sorrow, and heightened our regret that a career so promising should so soon have been cut short. Yet, while we speak the words of condolence, and express the sense of our bereavement, we will not fail to remember that God, who gave us, in our friend, such an illustration of Christian virtue, has taken him to higher enjoyments, and will sustain those who lean on Him even when smitten thus heavily.

Resolved, That these resolutions be published in the *New York Times*, *Brooklyn Times*, NEW YORK MEDICAL JOURNAL, and *Medical Record*, and that a copy be sent to the family.

H. D. NOYES, M. D., *President*.

R. F. WEIR, M. D., *Secretary*.

At a meeting of the Medical Society of the County of New York, held May 3, 1869, the following resolutions were unanimously adopted:

Whereas, it has pleased God to remove from earth Alexander H. Stevens, M. D., one of our oldest and most distinguished members:

Resolved, That this Society has heard of his death with sincere regret.

Resolved, That the Society looks back with great satisfaction on his long and honorable and useful career as an able and accomplished practitioner and teacher of medicine and surgery, and as a diligent laborer in the cause of public health.

Resolved, That this Society sympathizes with the family of the deceased in the painful bereavement which they have sustained.

Resolved, That a copy of these resolutions be sent to the family of the deceased, and that they be published in the medical journals of this city.

GEORGE T. ELLIOT, M. D., *President.*

Benjamin Howard, M. D., *Corresponding Secretary.*

Carbolic Acid in Burns.—Apropos of the use of carbolic acid in burns, as brought out in the discussion on this subject published in the last number of the Journal, we have independent and confirmatory testimony from our correspondent, Dr. W. W. Hewlett, of Babylon, L. I. In a letter, written before the publication of the discussion above referred to, he says:

I believe that in carbolic acid we have an invaluable agent in the treatment of burns of a superficial character, the first and second degrees, according to the celebrated classification of Dupuytren.

I have tried it in several instances with the most happy results.

The mode of application that is adopted by me is, to soak a piece of lint, or folded cotton cloth, of the size of the afflicted region, in a mixture of one part of the acid (liquid) to eight parts of glycerine or linseed-oil.

The report of the Brooklyn City Hospital for 1868 shows the number of patients treated in the hospital during that year to have been 1,660; 713 medical, and 947 surgical. The report gives a sketch of the history of the hospital, and of the various bequests that have from time to time been made to it. An appeal for the endowment of free beds is added.

In June, 1868, an Orthopedic Infirmary was added to the hospital. This is intended, we believe, for outdoor patients only. During the first half year of its operation there were treated in it 125 patients.

APPOINTMENTS.—Dr. LEWIS A. SAYRE, of this city, has been elected an honorary member of the Medical Society of Norway, Christiania.

DR. S. FLEET SPIER has been appointed surgeon to the Brooklyn City Hospital, to fill the vacancy occasioned by the death of Prof. Dewitt C. Enos. Dr. Spier is also filling the position of attending surgeon at the Brooklyn Dispensary, and Eye and Ear Infirmary in Tillary Street.—*Medical Record.*

MR. VERNEUIL has been elected to the place in the surgical section of the Academy of Medicine, Paris, vacated by the death of Velpeau.

ON SOME PHENOMENA OF ANÆSTHESIA BY PROTOXIDE OF NITROGEN.—Mr. F. Woodhouse Braine remarks (*British Medical Journal*, January 23, 1869), that sensual emotions are not unfrequently excited in both sexes. A man, who had been married about three months, stated, on awaking, that he had been dreaming of his wife, and an unmarried hysterical girl certainly gave evidence, by her movements, that she was quite aware of some of the duties of married life, and, moreover, in this case, the idea was still present when she was able to speak, for she addressed the administrator in terms far fonder than the occasion warranted ; while another girl, who had behaved in a similar manner, said, "I hope I have not said any thing naughty." Both these cases bring to one's mind many instances of trumped-up cases of felonious assault, and how inadvisable it is to use anæsthetics without a third person being in the room.

ASSOCIATION OF AMERICAN MEDICAL JOURNALISTS.—A number of editors of American medical journals were in attendance at the late meeting of the American Medical Association, and formed an organization under the name of the Association of American Medical Editors. Dr. N. S. DAVIS, of *Chicago Medical Examiner*, was chosen President; Dr. W. MCPHEETERS, of *St. Louis Medical and Surgical Reporter*, Vice-President; Dr. W. S. MITCHELL, of New Orleans *Journal of Medicine*, Permanent Secretary; Dr. J. BERIEN LINDSLY, of the *Nashville Journal of Medicine*, Secretary. The Association will hold its annual meeting at the same time and place as the meetings of the American Medical Association. The latter meets next year in Washington, D. C.

Army Personal.—The following changes have taken place in the Medical Staff, U. S. A., since the date of the last report, January 1, 1869: Reinstated—Assistant-Surgeon P. S. A. Cleary, March 8, 1869. Resigned—Surgeon C. Wagner, Brevet Lieutenant-Colonel, March 25, 1869. Retired—Surgeon R. C. Wood, Brevet Brigadier-General, February 22, 1869. Assistant-Surgeon H. Culbertson, January 8, 1869. Wholly retired—Assistant-Surgeon H. C. Parry, March 30, 1869. Died—Surgeon R. C. Wood, Brevet Brigadier-General, at New York City, March 28, 1869, of pneumonia; Assistant-Surgeon W. A. Bradley, Brevet Major, at Point San José, California, February 27, 1869, of convulsions.

There are now existing, in the Medical Staff of the Army, two vacancies in the rank of Surgeon, and fifty vacancies in the rank of Assistant Surgeon; but, under the recent act of Congress, reducing the size of the Army, no new appointments can be made in the Staff Corps. These vacancies, therefore, cannot at present be filled.

A Curious Case of Hermaphroditism.—The *Archives Générales* for March contains a description of one Catherine Hohmann, a hermaphrodite, so called. The record of this case, which has given rise to much discussion in Germany, was contributed originally to Virchow's *Archives*, vol. xlv., 1868, by Professor Friedreich. The following description of the case we condense from the French translation:

The subject was a domestic, forty-three years of age, born of parents who were perfectly developed. She had four brothers and sisters, who showed no vice of conformation. The midwife who attended at her birth detected the malformation of the genital organs, but thought it not worth while to inform the parents, and so the infant was brought up asa girl. She began to menstruate about the age of ten years; for a number of months before the catamenia were regular, she experienced marked symptoms—pointing evidently to the establishment of this function—all of which disappeared as soon as she became regular. From this time she lost quite regularly every month blood in such quantity as to flow from the genitalia. In 1866 the flow was arrested for some months, and since its reappearance the interval of menstruation has been reduced to three weeks. The average duration of the discharge was four or five days. For some days previous to the flow she experienced pain and swelling in the breasts—uneasy sensations in the lower part of the abdomen, and also nausea. She has also occasionally had epistaxis during the periods.

The voice resembled that of a woman up to the age of twenty-six. At this time she suffered from pain in her throat, accompanied with difficulty of deglutition and aphonia. The voice returned shortly afterward, but it was completely changed in character—it was a male voice and deep-toned.

The dress was that of a woman; the hair of the head is as long as that of women, and is of a dark color; the chin and upper lip are covered with a number of stiff harsh hairs several millimetres in length; the lower extremities also are covered with short hairs in great numbers. The features are those of a man, the larynx is large; the pomum Adami prominent; the voice, as before stated, is that of a man. The limbs are bony, the muscles well outlined. The thorax and pelvis have the conformation of a man's skeleton. Respiration is quiet and diaphragmatic. The breasts and nipples are developed like those of a woman.

The genital organs are abundantly covered with hairs. Above is seen a penis with its glans and prepuce; the penis is about three inches in length from the root to the tip of the glans, the glans itself measuring about one inch in length. In the place of the meatus urinarius there is a depression from which starts a furrow that follows down on the inferior surface of the penis, like the urethra, to within six millimetres of the root of the penis. From this point we find a short urethra which is suggestive of the urethra in a case of hypospadias, with the opening near the root of the penis. On the dorsal surface of the penis are two soft cutaneous folds which start on a level with the root of the penis, and then, separating somewhat, are lost upon the lateral surfaces toward the prepuce. These folds are considered the analogues of the labia minora [?]. The scrotum is well developed and formed of two unequal halves: the right one is of good size; the left is smaller, shrivelled up, and resembles a labium majus. In the right half, which is pendent, there is a well-developed testicle of normal size and consistence; and one can trace very distinctly the epididymis and vas deferens. There is without doubt a cremaster muscle, for the least mechanical irritation of the scrotum provokes reflex contractions. At the bottom of the left side of the scrotum we find a hard, illy-defined mass, as if it were cicatricial tissue, and which may possibly be considered a degenerated testicle.

In the left inguinal region there is found a flat body of the size of a bean, the nature of which it is difficult to determine. We might, strictly speaking, consider it an atrophied testicle.

On passing a sound into the urethra, which is of the size of that canal in an adult man, the bladder is readily reached, no obstacle being met with. On a number of occasions when using a sound of smaller size, and carrying it along the posterior wall of the urethra, it happened that the instrument passed into a sac-like cavity situated behind the urethral orifice. The sound was readily moved in a lateral direction, and the cavity, considered in relation to its position and form, was held to be that of a well-developed uterus. In following by the rectal touch the movements of the sound, Professor F. was convinced that the instrument was passed into a cavity near the posterior wall of the urethra, and by passing in a second instrument above the first and making it penetrate the bladder, the extremities of the two instruments were felt separated from each other by a wall about one inch in thickness. Neither the rectal touch nor the most careful examination of the parts situated on the sides of this pouch could ascertain the existence of any organ which could be considered either as an ovary or a second testicle. It was also impossible to recognize the existence of a prostate.

The attractions of this person, Catherine H., were always for women. In the presence of men she experienced a certain degree of repulsion, and she had rejected a number of offers of marriage which had been made to her. In the presence of men she never had erections, which were very frequent when she approached women. She confessed to having had frequent sexual intercourse with a female domestic, for whom she had conceived a deep love. She also acknowleged to having frequently admitted men to her embraces, without, however, having formed for them any attachment.

She had seminal emissions following lascivious dreams; the fluid discharged was found on microscopical examination to contain spermatozoa which were normal in movement and appearance. During her stay at the clinique she had one of her periodical flowings, and the blood was seen escaping both in drops and in a continuous flow from the canal of the urethra.

Her general health was perfect, all the other functions being performed with regularity.

To PROTECT WATER FROM THE ACTION OF LEAD PIPE.—Dr. Schwarz, of Breslau (*Dingler's Polytechnisches Journal*), notes a simple method of protecting water from the action of lead pipe, by forming on the inside surface of the pipes an insoluble sulphuret of lead. The operation, which is a very simple one, consists in filling the pipes with a warm and concentrated solution of sulphuret of potassium, or sodium; the solution is left in contact with the lead for about fifteen minutes.

NEW YORK

MEDICAL JOURNAL:

A MONTHLY RECORD OF

MEDICINE AND THE COLLATERAL SCIENCES.

VOL. IX.] JULY, 1869. [NO. 4.

Original Communications.

ART. I.—*Remarks on the Prognosis in Bright's Diseases.* Read at a Meeting of the New York County Medical Society. By AUSTIN FLINT, M. D.

PROGNOSIS, as entering into the science and art of medicine, admits of greater comprehensiveness than any of the subdivisions of general pathology. Comprehending any thing and every thing which may affect the judgment formed by the physician regarding the progress and termination of disease, this branch of knowledge, in its different relations, touches all the other departments of pathology. It embraces facts derived from morbid anatomy, from the symptomatic events and laws which belong to the clinical history of diseases, from diagnosis and from therapeutics. Its legitimate scope is not to be measured by the space usually accorded to it, at the present day, in medical treatises; for it is convenient to consider the prognostic bearing of facts in other departments, for the most part, incidentally, rather than to treat of them fully under a distinct head.

Considering prognosis as applied to particular diseases, it takes in much more than their average duration and the chances of death or recovery. These statistical facts possess about the same practical importance in forming a judgment regarding the progress and termination of a disease in any individual case, as have the mortuary tables upon which are based the principles of life assurance in deciding for every person the duration of life. The prognosis, in individual cases of a particular disease, first of all assumes the existence of that particular disease, that is, correctness of diagnosis is an essential prerequisite. Then the prognosis relates to the lesions which exist, if the disease be not purely functional, to the symptoms which are present, to the complications which occur, and to the therapeutic measures which may be employed. I offer these preliminary observations by way of explanation of the latitude which I shall give to the term prognosis in this paper. At the instance of my distinguished friend, the President of this Society, I shall ask your attention to some remarks on *the Prognosis in Bright's diseases*; and I propose to arrange my remarks under the following heads:

1. The prognosis considered with reference to the different renal affections constituting Bright's diseases.
2. The prognosis considered with reference to the symptoms and complications in Bright's diseases; and,
3. The prognosis considered with reference to the treatment of Bright's diseases.

1. *The prognosis considered with reference to the different renal affections constituting Bright's diseases.*

A question meets us at the threshold of the first of these three divisions of the subject: What are Bright's diseases? I say Bright's *diseases*, not Bright's *disease*, following, in this, the example of T. Grainger Stewart in his late valuable treatise. The name *Bright's disease*, applied to varied lesions of the kidneys, implies their unity. The doctrine that these varied lesions in fact, denote different stages, phases, modifications, or types, of one disease, was advocated especially by Christison and Frerichs, whose works were published within a few years after Bright's discovery, although Bright himself held a different opinion. Few pathologists, at the present moment, hold to the correctness of this doctrine; and the question now is, not whether the name Bright's disease embraces a single affection or several affections, but how many and what are the different affections to which this name has been applied? It cannot be regarded as strange, if it be true, that our present knowledge does not authorize a definite, positive answer to this question, when it is considered how recent is the discovery of certain affections of other organs, the lesions of which have been studied for a much longer period than those of the kidneys. Our knowledge of pulmonary emphysema, for example, dates from the researches of Laennec; and it is within the memory of members of the profession now living that bronchitis seated in the smaller bronchial tubes was imperfectly described under the names peripneumonia notha, and bastard pleurisy. If it be true, as it doubtless is, that, as regards clinical history and diagnosis, our present knowledge of Bright's diseases severally is incomplete and unsettled, let it be borne in mind that it is only within late years that medical practitioners have undertaken to differentiate pneumonia, bronchitis, and pleurisy. Moreover, the greater part of what is now known respecting the different affections of the liver has been acquired since the publication of the discovery by Bright in 1827. The progress, indeed, already made toward establishing the individuality of different affections which it has been customary to include under the name Bright's disease is by no means inconsiderable. It does not come within the scope of this paper to canvass the opinions of different pathologists, or to enter into a discussion of the question which I have raised; but, as preliminary to the first of the three aspects under which I propose to consider the prognosis, I shall simply enumerate several morbid conditions which, in the existing state of knowledge, it seems probable are the anatomical characters of different diseases.

1. Inflammation within the convoluted uriniferous tubes may be considered an individual disease pretty well established. It is too limited a view of the affection called, after Johnson, desquamative nephritis, and by Dickinson, tubal nephritis, to consider the inflammation as always acute. Doubtless here, as in other situations, the inflammation may be either acute, subacute, or chronic.

2. The morbid condition described by Bright, and called

the "smooth white kidney," should, as it seems to me, for the present, be reckoned as an individual disease. The theory which attributes this condition to inflammation within the tubes is hardly so well established as to warrant its exclusion as a separate affection. Even admitting that it is an inflammatory and an intratubular affection, its anatomical characters seem to be sufficient to constitute it a distinct disease.

3. The fatty kidney appears to have been rather unceremoniously thrust out of the group of Bright's diseases by some pathologists, on the ground either that this anatomical condition is due to a fatty degeneration of inflammatory products, or that it is merely incidental to other morbid affections of the kidneys. These reasons must be regarded as resting on inference, not on demonstration; the characters, both gross and microscopical, of the fatty kidney are highly distinctive, and an analogous anatomical condition of a fellow-gland, the liver, is recognized as a distinct affection. Hence, as it seems to me, for the present, at least, the fatty kidney is entitled to an independent position among the Bright's diseases, admitting that this, as well as each of the other affections, does not invariably exist alone, but may be associated with other lesions.

4. That the affection known as the fibroid, the contracted or atrophied, and the cirrhotic kidney, is to be regarded as holding a distinct place among Bright's diseases, is admitted by most pathologists, although with regard to this affection, as well as with regard to its analogue, cirrhosis of the liver, there is room for discussion and difference of opinion respecting the morbid processes of which this lesion is the result.

5. Finally, no one doubts the individuality of the affection called the waxy, the lardaceous, or the amyloid kidney, notwithstanding the mooted questions concerning this morbid condition.

Here, then, are five renal affections which have claims to be recognized as distinct, constituting, collectively, with our present knowledge, the group of Bright's diseases.

Now, as regards prognosis, these different diseases are by no means on the same footing. What is true of one, respecting the probability or possibility of recovery, is not true of the others. Undoubtedly a simple inflammation of the uriniferous tubes may end, if indeed it do not generally end, in recovery, leaving the structure of the kidneys intact; and this result may be expected, be the inflammation acute, subacute, or chronic. But it is probable that, in certain cases, this affection leads to the second of the five diseases, namely, the smooth white kidney, and perhaps also to the third of the five diseases, namely, the fatty kidney. Does recovery from the two diseases last named ever take place? Our present knowledge does not enable us to answer this question positively. But we may assume it to be highly probable that, having progressed to a certain extent, the morbid process or processes, whether inflammatory or not, which these diseases involve, may cease, and retrogression take place, leaving at length the organs, if not intact, not damaged enough to compromise seriously their functional capacity. The fourth disease, namely, the contracted or cirrhotic kidney, must be regarded as involving a permanent lesion. It is hardly possible for recovery to take place without a persistent structural injury; but even this lesion may cease to be progressive, after a greater or less amount of damage, and recovery be possible in the same sense as recovery from tuberculous disease of the lungs is considered as having taken place, that is, the morbid processes cease, and there are no longer any symptoms of disease, but the functional capacity of the organs is more or less impaired. The fifth disease, namely, the waxy kidney, is of less practical importance than the other diseases, because it is so rare; but it is not certain that the lesion peculiar to this disease may not disappear. At all events, this affection, like the three preceding affections, may be non-progressive after it has reached a certain point, the kidneys remaining unsound, but nevertheless competent to perform their functions sufficiently for life and even health.

Relatively considered, the prognosis is by far the most favorable, if only the first of these different affections exist, and of the four remaining affections, the prognosis is the most unfavorable if the contracted or cirrhotic kidney be the existing disease. Here, then, is an illustration of the fact that diagnosis is an important prerequisite for prognosis. Now, is it practicable, with our present knowledge, to diagnosticate the first of these five diseases, and to differentiate from each other the four remaining diseases? To consider the diagnosis, severally, of these diseases, would lead me beyond the limits to which this paper must be restricted. It must suffice to say that, although, in certain cases, the antecedent circumstances, the symptoms referable to the urine, together with other symptomatic phenomena, the age, and coexisting affections, warrant a discrimination with considerable confidence; yet, in not a small proportion of cases, the differential diagnosis, with the means at present available, cannot be made with positiveness. Then another questionarises: assuming the existence of either the smooth white kidney, the fatty kidney, the contracted kidney, or the waxy kidney, is it practicable to determine, in individual cases, whether or not the amount of lesion is consistent, or otherwise, with the ability of the organs to perform their functions sufficiently to warrant, as the prognosis, a duration of life and comfortable health for an indefinite period? This question cannot be answered affirmatively. It must be admitted that, with the means of investigation now at our command, we cannot gauge, with any thing like precision, the extent of damage which the kidneys have received.

I must hasten to ask what conclusions are to be formed respecting the prognosis considered with reference to the different renal affections constituting Bright's diseases? Regarding this division of the subject from the stand-point of clinical experience, in a certain proportion of cases of Bright's diseases recovery takes place. I have lately analyzed 103 cases, most of which were observed and recorded by myself. Of these 103 cases, in twenty-two there were good grounds for the opinion that recovery took place. In several of these cases, aside from the fact of recovery, the diagnostic points pertaining to the clinical history render it quite certain that the disease was tubal nephritis. But in other cases this diagnosis could not be made, and there is room for the supposition that the kidneys were the seat of lesions which were arrested, or, to speak more properly perhaps, ceased to progress, the organs being damaged, but not enough to prevent the recovery of health. An important practical conclusion, then, relating to this division of the subject, is, that the prognosis is not dependent on our ability to decide whether or not the disease be tubal nephritis; nor is it dependent on the fact of the non-existence, to a certain extent, of other of Bright's diseases.

The analytical study of my cases was instructive in another point of view, the importance of which seems not to have been sufficiently considered. I refer to the ability of the system to tolerate Bright's diseases, when they are progressive as well as when they are stationary. Of the 103 cases which I have analyzed, in twenty-five the ending was not known, the patients having been lost sight of. Most of these were hospital cases. In several of these cases the improvement was such that the patients desired to be discharged, feeling abundantly able to return to their avocations, which generally involved laborious exertions, and more or less exposure out of doors. In my report, embodying the results of the analysis, I have introduced an account of some of these cases. The analysis with reference to the previous history was instructive in the same point of view. Excluding cases in which the previous history showed some antecedent disease, of fifty-three cases, in thirty the general health was apparently good up to the special manifestations of renal disease, meaning by the phrase "special manifestations" either dropsy or uræmic phenomena. In six of these cases uræmic coma or convulsions were the first special manifestations, and they occurred either when the general health was supposed to be good, or when ailments had preceded for only three or four days. The tolerance of the disease was further shown by the fact that, in a number of instances, patients continued to work, as laborers, for weeks and even months after the occurrence of œdema of the face and limbs.

The tolerance of Bright's diseases is strikingly shown by cases in which uræmic coma and convulsions occur suddenly and destroy life, renal disease having existed for a greater or less period, perhaps for years, completely latent as regards the general condition of health. In illustration of this point, I will give, in as few words as possible, a summary of two of several cases which I have recorded.

A young woman, a patient of Dr. C. L. Mitchell, of Brooklyn, was attacked with uræmic coma in pregnancy, and was seen by the President of this Society in consultation with Dr.

Mitchell. Premature delivery was induced, and the patient apparently recovered; but repeated examinations of the urine subsequently afforded evidence of renal disease. Again she became pregnant, and premonitions of uræmic coma appeared. Miscarriage took place spontaneously, and apparent recovery ensued; but examinations of the urine, as before, showed renal disease. Three years after the first attack of uræmic coma, she was, to all appearance, in excellent health, and, after rising in the morning as well as usual, she suddenly became comatose, and died within forty-eight hours.

A coppersmith, aged forty-nine, had complained for several weeks of a sense of fatigue, but continued to attend to his business until he was obliged to quit work, in consequence of the occurring of vomiting. The urine, now examined for the first time, gave not a trace of albumen. On the following day the vomiting ceased, apparently in consequence of suppositories of morphia. Delirium and subsultus immediately followed; coma and convulsions succeeded, and death took place on the third day after his giving up work. On examination after death, the kidneys were found to be contracted, the weight of the two organs being five ounces.

Such cases as these are not novel. I give them simply as illustrations of a well-known fact, namely, the remarkable tolerance of renal disease, or their latency, in certain cases. The following conclusions are to be drawn from such cases with respect to prognosis: 1. Coma and convulsions may occur when the health, to all appearance, is good, the disease destroying life, as it were, by a sudden explosion. The most frequent disease in such cases, undoubtedly, is the contracted kidney. 2. Renal disease may exist for a long period, that is, for years, and it may progress until the kidneys are greatly damaged, without giving rise to any notable manifestations, and without compromising apparently the general health.

Important questions arise in connection with these conclusions. What are the causes determining the sudden explosion? Does the renal lesion progressively increase up to a certain degree, and then, simply as consequences of the requisite amount of damage to the kidneys, are the uræmic phenomena produced? The affirmative to this question is extremely improbable; for it is certainly unreasonable to suppose that such an increase of structural charges should take place in the space of a few hours as to occasion a transition from apparent health to fatal coma and convulsions. It is far more probable that these uræmic phenomena are due to causes superadded to, or concurrent with, the renal disease. Then arises the question, what are these superadded or concurrent causes? Are they causes which act upon the functional capacity of the kidneys independently of the renal disease; or do they relate either to the production of excrementitious principles in the tissues, or to defective elimination of these principles by other organs, or, again, to metamorphoses of these principles in the blood? The consideration of these and other important questions is inconsistent with the scope of this paper. I shall, however, refer to them in another connection; and with the few remarks which I have offered under the first of the three divisions, I pass to the second division of the subject.

2. *The prognosis considered with reference to the symptoms and complications in Bright's diseases.*

It is a well-known truth that Bright's diseases, existing antecedently to various affections, may determine the fatality of the latter, when, *per se*, they might be expected to end favorably. This is true of pneumonia, the continued fevers, etc. Preëxisting disease of the kidneys will serve to explain the occurrence of certain events of the clinical history, and a fatal termination in cases of intercurrent affections not dependent on the renal disease, but merely coincident with it. We may give to this truth a general expression by saying that the ability of the system to resist and recover from any important affection is more or less impaired by its occurrence in connection with Bright's diseases. Hence, the importance, with reference to prognosis, of determining, in individual cases of all affections, either the presence or absence of renal disease. Here, again, is exemplified the relation of prognosis to diagnosis. The existence of Bright's diseases may not be declared by their special manifestations, that is, by the occurrence of dropsy or uræmic phenomena. In other words, Bright's diseases may have existed, for a greater or less period, and been latent as regards these manifestations. The *ante-mortem* evidence of their coincidence is only to be obtained by examinations of the urine. The fact that albuminuria is incident to various affections, without denoting either of Bright's diseases, must be taken into account. Is the albuminuria found in connection with various affections, evidence of a coexisting renal disease, or is it merely a symptom of these affections, is a question, having an important bearing on the prognosis; and this question is to be settled by examinations of the urine with reference to other morbid characters, namely, tubular casts, the amount of urine secreted, and the specific gravity. On the other hand, it is to be borne in mind that renal disease may exist, although very rarely, without albuminuria; and that the absence of albumen in the urine is not, therefore, sufficient absolutely to exclude renal disease.

What has just been stated as true of the prognosis when intercurrent affections are developed by mere coincidence in cases of Bright's diseases, is not less true when these diseases give rise to important complications. Clinical observation has established an etiological relation between Bright's diseases and certain serous inflammations, namely, pleurisy, pericarditis, peritonitis, and meningitis. With the exception of the first of these complications (pleurisy), they prove fatal in the vast majority of the cases in which they occur; and the prognosis, as regards recovery from pleurisy, is vastly less favorable than when this affection occurs independently of renal disease.

How do coexisting structural affections of the heart affect the diagnosis in Bright's diseases? The pathological relations between Bright's diseases and structural affections of the heart, cannot be overlooked in answering this question. These relations have been open for discussion from the date of Bright's discovery to the present time. I must content myself with stating, in a few words, the views which appear to my mind most consistent with clinical facts. Simple hypertrophy of the left side of the heart, that is, hypertrophy not dependent on valvular lesions, is so extremely rare, exclusive of its occurrence in connection with renal disease, and is so frequent in this connection, that the association must be considered as involving a pathological relation. Again, hypertrophy of the heart dependent on valvular lesions being so frequent, and so often existing without renal disease, it is fair to conclude that, when simple hypertrophy is connected with renal disease, the hypertrophy is in the relation of a cause, not of an effect, of the renal disease. Assuming this view to be correct, it is not improbable, indeed it is probable, that the hypertrophy of the heart in this connection, as when it is an effect of valvular lesions, is compensatory or conservative. And if this be true, the coexistence of simple hypertrophy, to say the least, does not render the prognosis more unfavorable.

But in a certain proportion of cases, valvular lesions, with or without enlargement of the heart, are associated with renal disease. In view of their frequency, a certain allowance is to be made for mere coincidence in the association of these lesions with renal disease. Do these lesions ever result from renal disease? The affirmative to this question is not proven. Endocarditis is certainly not of frequent occurrence in Bright's diseases, nor is there ground for supposing that these diseases favor atheroma and calcification; and, exclusive of traumatic causes, these are the sources of valvular lesions. Assuming that endocarditis is sometimes an effect of renal disease, the duration of the latter is rarely sufficiently long for valvular lesions with enlargement of the heart to ensue, inasmuch as these are remote effects of endocarditis, as shown by their occurrence after acute articular rheumatism. On the other hand, considering the number of cases of valvular lesions, with enlargement of the heart, in which renal disease does not exist, it is doubtful whether the agency of the former in producing the latter is ever more than that of an auxiliary cause.

Finally, how is the prognosis affected by the coexistence of valvular lesions and enlargement of the heart with renal disease? In answer to this question, it may be said that the evils and danger which may belong to the cardiac lesions are added to those which belong to the renal disease. Valvular lesions in this connection, as when they exist alone, it is probable, are of importance, chiefly with reference to morbid effects after the heart has become dilated. Prior to this, they neither affect materially, nor are they affected by, the renal disease. When they have led to enlargement of the heart they may, as already stated, act as an auxiliary cause, increasing the disease of the kidneys; and, on the other hand, in proportion as the powers of the system become impaired by the renal disease, the ability to bear up against the cardiac lesions is lessened, and the danger from the latter is thereby proportionately increased.

Passing from the complications to the symptoms in Bright's diseases, for the purpose of condensation I shall embody my remarks in a few propositions. My purpose in doing this will, I trust, be a sufficient apology for an appearance of dogmatism. The prognosis, as regards symptoms, has reference to danger in two directions, namely: 1. From uræmic phenomena, meaning by this phrase, as heretofore, especially coma and convulsions; and, 2. Persistent and excessive dropsy, together with exhaustion.

Uræmic coma and convulsions are always to be considered as involving great immediate danger. Life may be destroyed within a few hours, and even within a few moments, from the occurrence of these symptomatic events. On the other hand, the patient may not only survive these events, but the recovery from the renal disease may be complete after their occurrence. Moreover, when the renal disease continues and progresses, the patient may survive repeated attacks of coma and convulsions; the attacks may recur after long intervals, during which there may be an appearance of recovery, inclusive even of the disappearence of albumen and tubular casts from the urine. The collection of cases which I have lately analyzed furnishes striking illustrations of the correctness of these statements.

Vomiting and purging are evidently in certain cases uræmic symptoms, and generally this can be determined by diagnostic circumstances which it would be out of place here to consider. If these symptoms be persistent, they betoken danger of coma and convulsions. They may also involve danger in the direction of innutrition and asthenia. I have known death to be attributable to the exhaustion produced by persistent vomiting in a case in which attacks of coma and convulsions with violent delirium failed to destroy life.

A great amount of dropsy by no means in itself involves an unfavorable prognosis. This occurs in cases which end in recovery. But in proportion as dropsy persists, or if it speedily return after having been removed by therapeutical measures, its import is ominous. It is the more unfavorable as a prognostic if it be associated with notable anæmia and general prostration. Dropsy excessively disproportionate in certain situations, namely, the pleural cavities, the air-cells of the lungs, and the pericardium, may involve immediate danger to life from its mechanical effect. This is, of course, true of œdema of the glottis, which sometimes occurs when there is little or no anasarca. A disproportionate amount of peritoneal dropsy, in general, denotes the coexistence of cirrhosis of the liver, and this renders the prognosis unfavorable. The absence of dropsy is no evidence against the existence of lesions which involve danger from uræmic phenomena.

The symptoms pertaining to the urine are generally considered by medical practitioners too exclusively with reference to diagnosis. Examinations of the urine afford important information respecting prognosis. Waiving the consideration of microscopical characters, especially of tubular casts (which as entering into the differentiation of the several Bright's diseases, are thus indirectly important with reference to prognosis), prognostics, as regards urinary changes, relate to albumen and urea. There is no definite or uniform relation between the presence of albumen in the urine and the uræmic phenomena. While an abundance of albumen is by no means inconsistent with the occurrence of uræmic phenomena, a small amount is no evidence against the liability to these phenomena; and uræmic coma and convulsions may occur when the urine is devoid of albumen. There is, however, a relation between the amount of albumen in the urine and general dropsy. As a rule, to which there are exceptions, albumen in the urine is abundant in proportion as the dropsy is great; and the disappearance of dropsy is rendered improbable by the continuance of albumen in the urine in large quantity. In conjunction with the absence of other symptoms denoting renal disease, the disappearence of albumen from the urine together with casts, constitutes evidence of recovery; it is, however, an important fact that both albumen and casts may disappear from the urine, after the occurrence of uræmic phenomena, and the urine be free from these morbid constituents for several weeks, when the recurrence of fatal coma and convulsions, preceded by the return of albumen and casts in the urine, render it probable that renal disease existed notwithstanding the absence, for a time, of its diagnostic criteria. I have reported a case exemplifying the points just stated.

That a relation exists between the amount of urea excreted in the urine and the occurrence of the symptoms or events attributable to uræmia, cannot be doubted. The importance of examinations of the urine with reference to this point is not, in general, sufficiently considered. As a means of determining the amount of urea excreted by the kidneys, the quantity of urine passed in the twenty-four hours and the specific gravity are data sufficient, often, for the practical information which the physician needs; but it would be an important improvement in practice if a simple mode of ascertaining with accuracy the quantity of urea in a specimen of urine were to be adopted and generally employed. We are warranted, perhaps, in stating that, as a rule, danger from uræmia is threatened in proportion as the quantity of urea daily excreted by the kidneys falls below the minimum of health. But there are important qualifications in the application of this rule. The quantity of urea which may be excreted by the skin and gastro-intestinal mucous membrane, without occasioning disturbance of the stomach and bowels, has not been ascertained. The morbid conditions of the system incident to renal disease may tend to restrict the production of the excrementitious principles of which urea is the product. The nervous system may acquire a tolerance of urea in the blood in large quantity, as narcotics and various poisons are by use taken with impunity in enormous doses. Here are points of inquiry which are yet to be studied. And when we ask what facts has clinical observation developed respecting the relations between the diminution of urea in the urine, its accumulation in the blood, and the phenomena which are attributed to uræmia, we are obliged to admit that here is a field of study as yet too little cultivated. How valuable a service would be rendered to practical medicine, by an extended series of examinations of the urine, with reference simply to fluctuations in the quantity of urea, in a large number of cases of Bright's diseases, and also, with a view to comparison, in other affections!

3. *The prognosis considered with reference to the treatment in Bright's diseases.*

The third division of the subject embraces topics of great practical importance. The question, how far may the prognosis be affected by treatment, opens up the consideration of Bright's diseases, under this aspect, to the fullest extent. It is obvious that, in the few moments which remain for remarks suggested by this question, I must limit myself to a few points, and these must be considered very briefly.

The first point of inquiry in respect of the prognosis of any disease which involves danger to life is, does medicine possess curative means by which the disease may be controlled? For example, how much the prognosis of pernicious intermittent fever hinges on our knowledge of the curative power of quinia. As regards this point of inquiry, however, I have nothing to say of the diseases under consideration. Excepting the use of the bichloride of mercury, which was advocated, as a curative remedy, by the late Professor Joseph M. Smith, I am not aware that the power of exerting a direct special remedial influence over these diseases is claimed in behalf of any drug or therapeutic measure. Of the use of the bichloride of mercury in these diseases, I cannot speak from any practical knowledge; but the judgment and experience of the distinguished teacher just named constitute an ample warrant for testing fully the value of this remedy.

The prognosis in Bright's diseases is affected by the successful employment, in certain cases, of means to prevent impending death. It can hardly be doubted that the conditions giving rise to uræmic coma and convulsions are sometimes removed by therapeutical interference, and the immediate danger of life averted. This happy triumph over death is sometimes followed by complete recovery from the renal affection. Were it admissible, on the score of time, I could cite illustrations of these facts from my own clinical experience. It is not often that medical practice furnishes occasions which call more urgently for the employment of therapeutical resources than the treatment of uræmic coma and convulsions. Whether the patient shall survive, or die within a few hours, may depend on the promptness and efficiency with which these resources are employed. To withhold or delay them is not less culpable than to allow suffocation to take place from œdema of the glottis without resorting to laryngotomy or tracheotomy. Alas for the safety of the patient, if the physician be wanting in appreciation of the remedial potency of hydragogue purgatives, and the hot air or vapor bath! I will go a step further, although therapeutical details are here out of place, and say that it may be extremely fortunate, as regards the safety of the patient, if the physician appreciate the value of a particular remedy, under these circumstances. I allude to elaterium. Again, hydrothorax and pulmonary œdema may occasion imminent danger of death. Here, too, an adequate appreciation of the same therapeutical resources may be of the same importance as regards the safety of the patient. And, in this connection, I cannot forbear distinguishing the particular remedy just named. Did time permit, I could cite instances which exemplify the wonderful efficiency of this remedy in arresting death by apnœa when threatened by hydrothorax and pulmonary œdema.

The prognosis in Bright's diseases may be affected by the judicious use of means to forestall coma and convulsions, as well as the important complications attributable to uræmia, whenever a deficient excretion of urea and certain premonitions furnish prophylactic indications. And, again, the prognosis may be affected by appropriate measures of treatment addressed to general dropsy, and to the impoverished condition of the blood.

Passing thus cursorily over these topics, and omitting others, I come finally to consider the prognosis with reference to treatment under aspects which seem to me especially important.

Reverting to facts presented in the first division of the subject, in a certain proportion of the cases of Bright's diseases, exclusive of tubal nephritis which may be expected to end in recovery leaving the kidneys intact, the different lesions in the first place may cease to progress beyond an amount not impairing materially the functional capacity of the kidneys; retrogression may take place, and recovery ensue in the same sense as recovery may follow an abscess or wound of an organ, a permanent but innocuous injury remaining. In the second place, the renal affection may continue, and even be progressive, for an indefinite period, without notably, or even appreciably, compromising the general health. The tolerance of Bright's diseases, or their latency, notwithstanding they involve lesions which have damaged considerably, and even greatly, the structure of the kidneys, diminishing proportionately the functional capacity of these organs, is a most important truth in its bearing on the prognosis considered with reference to treatment. The first great object of treatment of the Bright's diseases which involve structural lesions of the kidneys is the arrest of their progress. The next great object is the retardation of their progress. And, when these objects are beyond the resources of medicine, a great object still remains, namely, to secure, for the longest possible period, and as completely as possible, the tolerance of these diseases. Of course, the prognosis is affected favorably in proportion as these several objects lie within the grasp of treatment. How important, then, is the question, what measures of treatment tend most to promote the arrest, and most to retard the progress of the renal lesions in Bright's diseases, and what will best secure the tolerance or latency of these lesions! I can do but little justice to the importance of this question in the few remarks with which I shall conclude this paper.

We have no specifics to arrest or retard the progress of Bright's diseases. As regards the use of medicines, there is perhaps room for the belief that diuretics and cathartics, employed or continued injudiciously, not infrequently interfere with the objects of treatment now under consideration. To remove causes, if practicable, is of fundamental importance in the treatment of all diseases. But our knowledge of the etiology of Bright's diseases, excepting tubal nephritis, is singularly meagre. It is, however, of great importance to place patients, as far as possible, without the sphere of all appreciable morbific agencies. And it may be reasonably assumed that the progress of renal lesions will be most likely to be arrested, or, if not arrested, their progress will be most retarded, by measures, medicinal and hygienic, which are the most effective in placing the different organs and functions of the body, and the organism as a whole, in the best possible condition.

But at this moment the most important point in the treatment of chronic Bright's diseases, with a view to arresting or retarding their progress, relates to climate. On this point, the facts contained in the late excellent work by Dickinson are very striking, and in their practical bearing they seem to me to be exceedingly valuable.[1] Referring to Dickinson's work for full details, I will simply state that this author has brought together statistics showing the mortality from renal affections in different climates. The contrast in this respect between different climates is extraordinary. Comparing London and Paris with Bombay and Genoa, the proportion of deaths from renal disease to the total number of deaths in London, is 1 in 49, and in Paris, 1 in 266; whereas, the proportion in Bombay is 1 in 2,800, and in Genoa, 0 in 4,303. Again, at the hospital in Milan, dropsy with diseased kidneys occurred, on an average, once in 2,807 admissions; whereas, in St. Mary's Hospital, London, the proportion was 1 in 31, that is, the frequency in the latter, according to these figures, is one hundred times greater than in the former. Further statistics, derived from the reports of the British Army in different quarters of the globe, show the proportion of deaths from renal disease to be notably greater in temperate than in either tropical or cold climates. Facts offer to show that, in the frigid zone, renal affections are extremely rare. These facts warrant the expectation, in cases of chronic Bright's diseases occurring in temperate climates, that arrest of the diseases, or retardation of their progress, as well as increased and prolonged tolerance of them, may often be affected by a timely change of climate. Certainly these facts afford a stronger foundation for such an expectation than do facts relating to tuberculous disease of the lungs for expecting the same results from change of climate in cases of the latter disease. With reference to the prognosis under this aspect, it is vastly desirable to collect a sufficient number of cases showing the results of a change of climate in Bright's diseases. Facts show a notable difference in the mortality from these diseases in different situations in temperate latitudes. For instance, Paris and London offer a striking contrast. So that, changes of climate, not involving removal at great distances from country and friends, may affect materially the prognosis.

---

[1] On the Pathology and Treatment of Albuminuria, by William H. Dickinson, M. D., Cantab., etc., 1868.

Aside from change of climate, measures conducive to the tolerance of Bright's diseases have not been sufficiently considered by physicians. In a rational point of view, these measures relate especially to uræmia and hydræmia. As regards uræmia, these questions arise: What plan of alimentation will meet sufficiently the requirements for nutrition, and, at the same time, favor the production of the least amount of urea consistent with the welfare of the economy? What habits of life, as regards physical exercise, mental activity, etc., are conducive toward the minimum production of urea compatible with health? What are the measures, hygienic and medicinal, which, without doing harm, will best secure the elimination of urea elsewhere than through the kidneys? Are there any means by which the nervous and other structures may be protected against the morbid effects of urea accumulating in the blood? As regards hydræmia, we may ask, how can the loss of albumen through the kidneys be checked; and what means, dietetic, medicinal, or regimenal, will contribute most to restore the deficient nutritive constituents to the blood?

When I began to write this paper, I designed to devote to these questions considerable space. A few words will not suffice for their consideration. This, therefore, must be reserved for some other occasion, if not relinquished to more competent hands.

Art. II.—*The Wire Loop; a Substitute for the Ligature, and its Use in the Treatment of Aneurism.* By A. M. Pollock, M. D., Pittsburg, Pa.

In the winter of 1859–'60, I conceived the idea of arresting hæmorrhage by a loop of wire thrown around the blood-vessel, as a substitute for the ordinary ligature; and also as a substitute for compression, or the ligature, in the treatment of aneurism. I communicated the fact to several medical friends, and made known to them the manner in which I intended to apply it. I had no desire to make it public, unless experience should prove it to be of value.

I had been in the habit of using wire sutures for two or three years, and had once or twice applied iron wire as a ligature in the ordinary manner, but the impossibility of removing it rendered it objectionable, and I did not feel satisfied with the method of cutting the ends short and leaving it on the wound. I have had no experience with acupressure, as the plan of the loop occurred to me about the time the former began to attract the attention of surgeons; and, feeling satisfied that this plan possessed all the advantages without the defects of the needle pressure, I lost no time in subjecting it to the test of experience.

I have no desire to discuss, theoretically, the advantages of the different kinds of ligature, or methods of arresting hæmorrhage, as I believe more will be done toward establishing that which is possessed of the greatest value by a faithful record of the facts in each case, leaving the profession to draw their own conclusions. But, to show what advantages are claimed for this substitute for the organic ligature, I will state that we expect:

1. Union by first intention *more frequently.*
2. Secondary hæmorrhage *less frequently.*
3. Equal facility in application.
4. The foreign body can be removed from the wound at pleasure.

I am satisfied from my experience that, if it were only on an equality with the organic ligature in all other respects, except the facility with which it can be removed, it should have a decided preference. For some time after I commenced its use, I continued to tie small vessels, such as would not afford satisfactory evidence of its security, with the silk ligature, but I have frequently had so much trouble in removing them, that of late I apply the loop on all vessels that require a ligature.

Before detailing my cases I will take occasion to say that I make no claim to originality in the use of metallic substances as a substitute for the organic ligature, but only for the method of applying the wire so that it will securely control hæmorrhage and admit of removal at the pleasure of the operator. And as my cases and dates can be fully authenticated, as well as the time when I made known the plan to my medical friends, I feel that, if it possesses any merit whatever, I may in justice lay some claim to it. It is true that no modern surgeon can rightfully claim originality in the use of metallic ligatures, but one is certainly entitled to some credit for adapting to practical use an idea of another which may have lain obsolete for centuries.

Mr. Dix[1] has anticipated me in publication, and there is a singular similarity in our procedure, but no possibility that one copied from the other, as my first case was on the 4th of January, 1860, and was never published.

If the carefully-observed and faithfully-recorded facts in the following cases shall be found to have added a mite to the common store of our knowledge, then will the purpose of this paper have been fully accomplished; and the question as to who originated the plan will be, to me, of secondary consideration:

CASE I.—January 4, 1860. Sister Catherine, Mercy Hospital. Ring-finger, right hand, amputated through first phalanx for caries of the bone, from injury by broken glass, two or three months previous. Symptoms of tetanus. Two arteries were secured by loops of iron wire thrown around them with a common suture needle, and twisted on the cutaneous surface. Loops removed on the fourth day.

CASE II.—December 28, 1860. J. A——, Findley township, Alleghany County, farmer, aged fifty-four. Senile gangrene, line of demarcation a little above middle of leg; much emaciated and very feeble. Selected the thigh as the proper place to amputate, on account of less danger of the disease attacking the stump, as it was supposed the circulation would be better there than at a lower point. The limb was removed, under the influence of ether, by the flap operation. The femoral artery was not ossified, but cartilaginous. Only one ligature was required, which was applied by passing a long straight needle, armed with iron wire, from the cutaneous surface of the flap through on one side of the artery, and about half an inch from its cut extremity, and back again from the other side of the artery to the cutaneous surface, about the fourth of an inch from the point of entrance. The needle was then cut off, and the ends of the wire passed through Bozeman's wire-twister, and, after making sufficient traction to arrest the flow of blood, was secured by a few twists. The flaps were securely and accurately held together by numerous pins and gum-loops. On the eighth day the loop was removed, and there was union throughout the stump.

---

[1] On the Wire Compress: a Substitute for the Ligature. By John A. Dix, Esq., Surgeon to the Hull and Sculcoats Dispensary. Read before the Royal Medical and Chirurgical Society, January 1, 1863.

Case III.—February 8, 1861. A. B——, Mercy Hospital. Caries of tarsal bones; scrofulous. Chopart's amputation. The arteria dorsalis was secured by one iron-wire loop, in the same manner as in Case II. No other vessel required a ligature. Loop removed on the sixth day. Union by first intention.

Case IV.—J. A——, same patient as Case II. Mr. A. improved greatly in health for three or four months, when gangrene commenced in the small toe of the remaining leg, as it had in the first. Its progress was rapid, and his suffering so great that he begged to have the leg removed without waiting for a line of separation, preferring death to his present condition; and his health was failing so rapidly that removal of the limb appeared to be the only means of safety, small as that might be. The amputation was made at the same point, and in the same manner, as the first, while he was under the influence of ether. Only one loop was required. The artery was less diseased than in the other limb. The arteries in both, below the knees, were ossified. On the ninth day the loop was removed, and the union was as perfect as in the first. Mr. A. is now, more than eight years after the last amputation, living, and in the enjoyment of good health.

Case V.—July 2, 1862. J. B——, Mercy Hospital. Compound fracture of left leg, railroad accident. Flap amputation through lower third of thigh. Three arteries secured with iron-wire loop by tying on the cutaneous surface.

Case VI.—July 2, 1862. J. B.——, Mercy Hospital. Compound fracture of the right leg. Same patient as Case V. Flap amputation below knee. Three arteries secured with iron-wire loop by tying on the cutaneous surface. Died a few hours after the operation.

Case VII.—September 24, 1862. J. C——, aged sixty, Mercy Hospital. Moist gangrene commenced in foot about six weeks ago. Line of separation below the knee. Greatly emaciated. Amputation through lower third of thigh, by double flap. Femoral artery secured by iron-wire loop, and tied over a cylinder of wood. No other artery required a ligature. Flaps held together with iron-wire sutures. Artery but slightly altered in structure above the knee. Gangrene returned in the stump, and he died just two weeks after the operation. Not the slightest hæmorrhage, though the loop was loosened by the gangrene, and removed on the fourth day.

Case VIII.—December 10, 1862. B. G——, Mercy Hospital, soldier, aged twenty-three, wounded in the wrist at battle of Antietam, by a fragment of shell. Caries of carpal bones followed. Flap amputation in lower part of forearm. Radial and ulnar arteries secured with the iron-wire loop by a knot on the cutaneous surface. Flaps held together with iron-wire sutures. Union by first intention. One of the loops removed on the fourth day, the other not for three weeks.

Case IX.—January 13, 1863. P. G——, Mercy Hospital, aged thirteen. Compound fracture of left arm, involving the elbow-joint. The accident occurred on the 7th, gangrene commenced on the 11th inst., and the arm was amputated by flap operation above the middle, on the 13th inst. The brachial artery was secured by the iron-wire loop in the usual manner, except to tie it over a short piece of gum bougie. Flaps held together with iron-wire sutures. On the fifth day the loop was removed, it being quite loose. Considerable sloughing occurred, and the stump was threatened with gangrene. No hæmorrhage. The boy was in a very feeble condition at the time of the operation, as he had, in addition to the injured arm, a comminuted fracture of the thigh and leg, and severe contusion of the entire left side, from being ground in the pit of a fly-wheel. Discharged, cured, April 12th.

Case X.—April 4, 1863. J. T——, Mercy Hospital. Caries of carpal bones, from a gunshot wound at battle of Malvern Hill. Flap amputation above the wrist; the radial artery, the only one requiring a ligature, was secured with the iron-wire loop by tying on the cutaneous surface. Flaps held together with iron-wire sutures. On the fourth day the loop was removed. Union by first intention, except a small portion along the ulnar border.

Case XI.—April 4, 1863. M. F——, aged eighty, Mercy Hospital. Epithelial cancer of left thumb, tumor about the size of an orange. Thumb and metacarpal bone removed together. Radial artery secured with iron-wire loop by tying on the cutaneous surface, and the wound left to granulate. Loop removed on the fourth day.

Case XII.—January 8, 1864. G. M——, Mercy Hospital, aged twenty-four. Compound fracture of leg by being caught between the engine and tender in a railroad collision, in which position he was held for two hours before he could be extricated, and, as the night was exceedingly cold, he was almost frozen. Leg amputated by flaps below the knee. Two vessels secured with the iron-wire loop by tying on the cutaneous surface. Loop removed on the sixth day. Died of erysipelas one week after the operation.

Case XIII.—June 5, 1864. M. F——, aged eighty-one, Mercy Hospital. Same patient as Case XI., cancer returned in lower part of forearm. Amputation by flaps in lower third. Radial and ulnar arteries secured by the iron-wire loop by tying on the cutaneous surface. Loops removed on the fifth day.

Case XIV.—January 4, 1865. J. P——, Mercy Hospital. Compound fracture of leg in a railroad accident. Amputation by flaps through lower third of thigh. Two vessels secured with loops of iron wire by tying on the cutaneous surface. Loops removed on the sixth day. Died of erysipelas, January 9th.

Case XV.—September 4, 1865. L. C——, Mercy Hospital. Compound fracture of forearm two weeks ago. Flap amputation above elbow. Two vessels secured with loops of iron wire by tying on the cutaneous surface. Loops removed on the seventh day. On the fourth day after the operation considerable hæmorrhage of arterial character occurred, which rendered it necessary to open the flaps to seek the source. The vessels ligated were found perfectly secured, the exposure arrested the bleeding, and there was no further trouble. Died of pyæmia, September 14th. Arteries in stump examined, and found to be perfectly occluded, not by coagulum, but thickening of their walls, for about one inch from their extremity.

Case XVI.—October 29, 1867. H. M——, Lawrenceville. Caries of bone of middle finger and head of metacarpal bone. Head of metacarpal bone removed with finger; one vessel secured with silver-wire loop by tying on the cutaneous surface. Loop removed on fourth day. Union by first intention.

Case XVII.—November 26, 1867. Mrs. J. C. B——, Pittsburg. Scirrhus of left mamma. Breast amputated, and one vessel secured with silver-wire loop by tying on the cutaneous surface. Loop removed on the fifth day. Union by first intention.

Case XVIII.—December 25, 1867. D. J——, City Farm, aged thirty-five. Both feet frozen night of December 15th; gangrene extended to about the middle of the legs. Double amputation by flaps below the knees. Three vessels in one, and two in the other leg were secured with silver-wire loops by tying on the cutaneous surface. Loops removed on the ninth day; considerable union in both. Made a good recovery.

Case XIX.—January 3, 1868. S. M——, aged forty-three, City Farm. Both feet frozen on the night of December 23d; gangrene extended above the ankles; tetanus set in January 1st. Double amputation by flaps about the middle of the legs. Three vessels in each secured with the silver-wire loop by tying on the cutaneous surface. Died of tetanus, January 5th.

Case XX.—February 4, 1868. Mrs. C. H——, aged forty-three, Fleming Station, Pittsburg and Fort Wayne Railroad. Scirrhus of right mamma. Breast amputated, and three vessels secured with the silver-wire loop by tying on the cutaneous surface. Loops removed on sixth day. Union by first intention.

Case XXI.—May 17, 1868. W. S. S——, male, aged eighteen, Alleghany. Left foot and leg crushed by a railroad car passing over it; flap amputation close below the knee, about two hours after the accident. Two vessels secured with the silver-wire loop by tying on the cutaneous surface.

Removed the anterior loop on the fifth day, and the posterior on the sixth day. All, but a small portion about the centre of the flap, united by first intention. The flaps were held in apposition by fourteen silver-wire sutures.

Case XXII.—June 4, 1868. Mrs. P. C——, aged forty-three, Pittsburg. Scirrhus of left mamma, amputated, and the artery in the angle nearest the axilla secured with the silver-wire loop by tying on the cutaneous surface, and two small arteries closed by torsion. Wound closed with fifteen silver-wire sutures. Loop removed on the third day. All, but the central part, where tension was greatest, united by first intention.

Case XXIII.—June 17, 1868. Mrs. B. S——, aged sixty, Sharpsburg. Scirrhus of left mamma, amputated, and two vessels secured with the silver-wire loop, one by torsion. Wound closed with thirteen silver-wire sutures. Loops removed on the third day. Almost entire union by first intention.

Case XXIV.—August 12, 1868. J. M——, male, aged forty-eight. Foot crushed by a railroad car passing over it July 30th, thirty miles from the city, where it had been dressed with a view of saving the foot. When I saw the patient, about thirty hours after the accident, the time had passed for a primary amputation, as gangrene had commenced. Line of separation a little above the ankle, but inflammation and suppuration had extended midway up the leg. Amputation by flaps four or five inches below the knee, and two vessels secured with the silver-wire loop by tying on the cutaneous surface. Removed the anterior loop on the sixth day, and the posterior on the seventh. About two-thirds of the flaps on the exterior of the leg united. Died of pyæmia, on the eleventh day after the operation. Arteries of stump examined, and found to be perfectly occluded, or rather obliterated, as it was difficult to distinguish the vessel below the ligature from the surrounding tissues. The vessel included in the anterior loop was a branch of one of the tibials, and was obliterated as high as the point where the specimen had been separated; the posterior loop included the anterior tibial, and that vessel was occluded as high as the first branch, more than an inch above the point of contact with the wire. A probe could be passed from above down to this point, and there the vessel appeared to terminate. I have no doubt the poisoning in this case, as well as in Case XV., occurred before the operation.

The generally-received opinion, that it is indispensable to divide the two inner coats by the ligature, to insure occlusion of the canal, is contradicted by the condition of the arteries in Cases XV. and XXIV. It would appear that the irritation, produced by the pressure of the wire, causes effusion of plastic lymph in the walls of the artery, as well as on the internal coat, and that occlusion occurs as much from the general thickening as from adhesion of the sides of the vessel. At all events, so far as such limited observation can do, it establishes the fact that the arrest and prevention of hæmorrhage, by acupressure and the wire loop, must be explained on different patho-physiological principles from the organic ligature, as by the former there is not sufficient pressure made to rupture any of the coats of the vessel; and, as it is well known that metallic bodies seldom cause suppurative inflammation, it is perhaps desirable to prolong the application of the wire, with a view to keep up the deposit of plastic matter, until the internal coat is firmly united.

The method of applying the wire loop has been that described in Case II., but for one not familiar with the procedure, two needles would be used more readily. They should be fixed on each end of the wire, and passed from the cut surface of the flap, on opposite sides of the artery, to the cutaneous surface. A slim needle four or five inches long, with a cutting-point, will answer for all cases, and can be passed with the utmost ease. I prefer, however, a needle of the same dimensions without a cutting-point. A good steel darning-needle answers every purpose, and with a needle of this description there is less danger of wounding a vessel which may be in its track. I never disturb the artery in its relation to the surrounding parts, but pass the needle close to its walls, about half an inch from its cut extremity, avoiding, when practicable, the nerve and vein. However, I have frequently included considerable muscular tissue in the loop, and occasionally the nerve and vein, without unpleasant consequences. The points of emergence on the cutaneous surface should be from one-fourth to one-third of an inch apart, and, after making sufficient traction to arrest the flow of blood, the ends may be twisted together, knotted together, or tied over a small cylinder of gutta percha, or a bit of wooden pencil. If the latter method is adopted, the cylinder should be two or three inches long, to distribute the pressure over a larger surface, and it should be enveloped in lint to prevent excoriation.

In the foregoing cases, the ends were secured forty-one times by a knot, four times by twisting, and twice by tying over a cylinder. The only objection to tying directly on the skin is, that occasionally the loop cuts through and may require to be raised by inserting beneath it a small blunt-hook before it can be cut. When the wire has been properly applied, no foreign body will be seen on the cut surfaces of the flap. I have used annealed iron wire twenty-four times, pure silver wire twenty-three times, and can give no preference. When it is desired to remove the loop, it is only necessary to seize one end with a pair of forceps, cut one strand, and make gentle traction by rolling the wire around the forceps in the direction of its concavity ; in which manner it may be disengaged without at all disturbing the parts enclosed.

The average time of removing the loops is five and four-sevenths days, and I am satisfied it was left on longer than was absolutely necessary, but in all cases it produced so little disturbance, that there appeared to be no necessity for haste in its removal. A premature removal might lead to secondary hæmorrhage from non-occlusion.

My experience now comprises a list of twenty-six amputations, in which the loop was applied on forty-seven arteries, and in no instance did an accident occur which could be justly attributed to the manner of ligation. Secondary hæmorrhage occurred in but one instance (Case XV.), and actual examination proved it not to be the fault of the ligatures. Erysipelas and pyæmia did not occur more frequently than when the organic ligature is used, and the nine cases of union by *first intention* certainly give a very fair ratio. An examination of the cases will show they have not been selected with a view to give a bias to this method, as many of them were hospital patients, and bad subjects. The arteries involved will corroborate the same fact—they were distributed as follows: foot, one; leg, ten; thigh, seventeen; finger, three; forearm, six; arm, three; mamma, seven.

This method of arresting hæmorrhage can be used in all cases where any other method would be feasible, to say the least. I have applied it when acupressure would have been inapplicable, and an organic ligature could not have been used without a troublesome dissection. In case an artery is severed as high as, or above, the base of the flaps, or between two bones, all that is necessary to secure it is, to insert the needle obliquely upward and compress it against the surrounding tissues.

At the time I devised the plan of arresting hæmorrhage by the wire loop, it also occurred to me that the same means might be used in the treatment of aneurism, as a substitute for the ligature, and compression, either digital or mechanical. The plan I proposed to adopt, and which I would have put in execution in the following case, had the patient been fully under my own control, was to pass around the artery at the most superficial point, by means of a strong curved needle, a loop of wire, including a considerable portion of muscular tissue, and, of course, the nerve and vein; then secure the loop over a small solid cylinder, so as to make pressure directly on the vessel. I am certain that in this way a very small amount of traction on the wire would arrest the flow of blood through the artery, and would be infinitely less irksome or painful to the patient than any other method of compression. And how it would be more likely to injure the vein or nerve than digital or clamp pressure, is more than I can comprehend. The plan adopted in the case now reported is not more objectionable than by the organic ligature, and prevents a common accident after the latter—secondary hæmorrhage:

Popliteal Aneurism; treated with Wire Loop.

October 14, 1867. J. H——, aged thirty-five, married, Alleghany City, iron moulder. Popliteal aneurism of between six and seven weeks' standing, caused by lifting a heavy weight. Had been treated three weeks with compress in popliteal space and bandage to the entire limb, without benefit. The limb became œdematous, and so painful as to interfere seriously with locomotion and sleep. Tumor about three and a half inches in diameter, and pulsating strongly. At 3 o'clock, P. M., the patient was etherized, and the femoral artery exposed near the apex of Scarpa's triangle; the sheath was opened, and a double strand of No. 29 silver wire passed around the vessel with Parrish's aneurism-needle; then each end was threaded on a long straight needle, and passed through the sartorius muscle to the surface. The wound was then brought accurately together with six silver-wire sutures, and the loop secured over a thin cylinder of wood, about three inches long, enveloped in lint, by a single knot and a few twists. A very moderate amount of pressure arrested entirely the pulsation in the tumor. The limb was enveloped in cotton-wool, lightly bandaged, and the patient placed in bed, with the foot slightly elevated.

On the 21st October, at 10 A. M., untwisted the loop and removed the cylinder, thus taking off all pressure from the artery. No sign of returning pulsation in the aneurism. Femoral artery could be felt throbbing distinctly down to about an inch above the point of compression. Immediate union throughout the incision. October 22d, removed the wire entirely from the artery. It was left *in situ* the day before, so that compression could be renewed in case pulsation returned in the tumor. October 24th, tumor diminishing rapidly; foot has attained nearly its natural temperature, and is free from pain. Hyperæsthesia, which occurred on the third day, diminishing. From this date the patient required no particular attention, and rapidly progressed to complete recovery.

I am indebted to my friend, Dr. James McCann, for the following notes taken of the temperature: Oct. 15, 8 o'clock, P. M.—dorsum of foot, 92.5°; popliteal space, diseased side, 99°; axilla, 98.5°. Oct. 16—foot, 90.5°; popliteal space, $98.\frac{7}{10}$°; axilla, 98.5°. Oct. 17—foot, between toes, 95°; popliteal space, $98\frac{7}{10}$°; axilla, 98.5°. Oct. 18—between toes, $95\frac{3}{10}$°; popliteal space, $98\frac{7}{10}$°; axilla, $98\frac{3}{10}$°. Oct. 20—between toes, $95\frac{7}{10}$°; popliteal space, 98.5°. Oct. 22—between toes, $95\frac{7}{10}$°; popliteal space, $98\frac{3}{10}$°.

Mr. H. reports to-day, October 27, 1868, his health was never better. Has not lost a day since he resumed work at his former occupation, moulding for kettles. By accurate measurement, the legs are found to be of the same size. No pulsation can be felt in the femoral artery below the origin of the profunda. No vestige left of the aneurismal sac. Is not aware of any difference in the strength of his legs. Sensation the same in each. Temperature in either popliteal space 95°. Veins a little larger in diseased leg.

Clinical Records from Private Practice.

I.—*Fractures of the Femur.* By Albert T. Wheelock, M. D., Belfast, Me.

Several times I have looked over Hamilton on Fractures and Dislocations, without finding any account of Gibson's (formerly Professor in the University of Pennsylvania) method of treating fractures of the femur as described in his work on the Institutes and Practice of Surgery. This method is by using two long splints like crutches, on sides of the body and limbs, to make extension from the axillas, which method has been used by the writer of this for many years, with entire success. The past summer shows, from my records of practice, three cases, all young subjects, however, that have been thus treated with most favorable results. Two of the cases were boys of twelve years of age, the other a girl of fifteen. They were all placed on mattresses, with a sacking fastened upon a frame, with a perforation to correspond with the nates, laid over the sheets of the bed, upon which the patient was placed. Very little complaint was made at any time; the patients all ate and slept well, no soiling of the bedclothes, almost the whole care being taken of them by the female nurses, with very few visits from the surgeon, he not being conveniently near. These splints, as before mentioned, are made like a crutch, with tenons at the lower end, and several inches in length, which are to be inserted into the foot-board that has the mortices to correspond, made of course diagonal, to give the natural and easy position to the feet which are to be fastened to it. And it was found most convenient, instead of the gaiters usually extemporized for the purpose, to use the shoes and stockings. With almost the least skill and the simplest tools these splints can be made anywhere, of the use of which a clear and accurate description is given in Professor Gibson's wonderfully faithful and comprehensive work on surgery. It has been quite remarkable how rapidly the patients became quietly accustomed to this rigid, straight position of the body. Of course, there will be very little opportunity for disturbance of fractured parts by motion, the cure therefore being very rapid indeed. No serious objection has ever occurred to me in the practice of this method, and it seems strange that it is not generally and universally adopted. These cases all recovered with perfect use of the limbs, and with no shortening whatever that could be detected.

WOUND OF KNEE-JOINT.

The subject of this case was thirteen years of age. Season of the year, July. The wound was made by a sharp hatchet, penetrating the knee-joint at the inner edge of the patella, the external wound about an inch in length. In three days violent inflammation commenced; swelling of about one-half increase of the diameter; severe pain, and abundant discharge of the synovial fluid, which continued three weeks, gradually ceasing by the closing of the wound. Instead of cold dressings, a plaster of simple cerate was applied covering the upper half of the length and breadth of the joint and say six inches in length. All the warmth that the comfort would possibly admit, woollen stockings, extra warmth at night, was applied to the feet to invite the circulation in that direction, though the limb was kept constantly fifteen degrees above the horizontal position. Five or six days after there was a tendency to flex the limb, when it was sufficiently confined by a three-sided splint in which it was placed, so that, if anchylosis should result, the limb would be in a desirable position. The pain seemed excruciatingly severe, to the disturbance of persons in neighboring houses for several days. Some days before the closing of the wound the patient was encouraged to flex the joint slightly, as much as could be done by the muscular strength of the limb, without pain. No wet dressings at any part of the treatment. As the inflammation subsided, a dressing of simple cerate was employed of suitable size for the wound. Recovery complete in about seven weeks, with entire use of joint and limb.

ART. II.—*Poisoning of an Infant by Laudanum; Shampooing and Belladonna.* By A. CALKINS, M. D.

THE following case was reported to me by Dr. G. H. Bennett, of Livingston County, N. Y., as having occurred in his own practice, and is strictly accurate in every particular. A male infant, one of twins (children of a prominent professional gentleman in the place), had had, at three months, for some inconsiderable malaise, an enema administered by the mother, in which had been combined a *teaspoonful of laudanum.* Now, it is to be borne in mind that twelve drops, thus used by Rayer upon an adult patient, destroyed life. In this case, the operation was in the morning, and by mid-day the child, after convulsions, was verging to deep coma. A physician of the vicinage, having been called *pro tem.*, ordered a simple enema, but did nothing further actively than to enjoin upon the mother *to keep the child absolutely quiet, as otherwise the fits would certainly return;* and thereupon retired. Dr. B. soon arrived, and began a systematic shampooing process over the entire body and limbs, which was relieved occasionally with jets of cold water; and this process was kept up without remission. Tincture of belladonna, about three drops per hour, in water, was also begun upon, and the family were enjoined to proceed after this manner without relaxation, the doctor being out and in, calling frequently to observe, and superintend, and assist. The course was faithfully carried out, and for *three days and nights continuously*, with one exceptional interval, and this upon the remonstrance of a lady friend who had happened in, and who insisted that such violence would be the death of the child for certain. The mother, however, soon became alarmed at the recurrence of the violent symptoms (the doctor was absent just then), and of herself renewed the previous treatment, though the infant was brought back to the prior status with extreme difficulty, and under much doubt. It recovered without other untoward effects, and is now, two years after, as hale as need be. Dr. B., and as I apprehend with reason, attributes the resuscitation more to the external appliances than to the belladonna. The subject, as might be supposed, was petulant and fretful for a time, after such a thrumming, or rather pommelling.

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, May 3, 1869.

Dr. George T. Elliot, Jr., President, in the chair.

The resolutions upon the death of Dr. Alexander H. Stevens, published in our last number, were unanimously adopted.

The report of the Committee on Medical Intelligence was read by Dr. Thompson.

PROGNOSIS IN BRIGHT'S DISEASES.

Dr. Austin Flint read the paper upon this subject, which appears in full in our present number.

Dr. H. Knapp referred to the importance of retinitis as a prognostic sign in Bright's diseases. It was commonly stated that retinitis occurred only in the advanced stages of the renal affection, and this was true of the vast majority of cases. But sometimes it presented itself even in the early stages; so that the ophthalmoscope might determine the diagnosis months before any thoracic or cerebral symptoms appeared. In many cases the engorged veins would diminish in size, as also the exudations and hæmorrhages, and spots of fatty degeneration; but relapses were almost sure to occur, so that, where retinitis existed, it was pretty safe to predict a fatal result. Yet exceptions to this rule were to be found, and the doctor had met with some in his own practice. One patient, whom he had found affected with retinitis in 1862, and had supposed long dead, turned up five years later in full health. Another, a man forty or fifty years of age, had Bright's retinitis in one eye, and said that he had recovered from a similar attack in the other eye some eight years before. The multiplication and peculiar contortion of the retinal vessels, as exhibited in these two cases after recovery, the speaker had never seen paralleled. They were shown in a black-board drawing.

Dr. NEWMAN believed that the ophthalmoscope gave the only reliable indications for prognosis in Bright's diseases. He was in the habit of submitting all such cases to its decision, and this the event had always verified. In half a dozen cases examined by Dr. Althof, the prognosis had been very accurate. Perhaps the most striking cases were those where the examination gave a negative result. A woman, under the speaker's observation for seven years, had several attacks of œdema with albuminuria, leading to the diagnosis of Bright's diseases. About four years ago these symptoms were very marked. She went to the New York Hospital and remained there over ten months, thus coming under the observation of the whole staff, who all concurred in the diagnosis. The urine showed casts and albumen in abundance. Dr. N. followed up the case, expecting the patient's death; but after ten months she got well. Soon afterward she had another attack. It occurred to him that no ophthalmoscopic examination had been made; she was sent to Dr. Noyes, who reported a negative result; and she was still alive.

Dr. GOUVERNEUR M. SMITH thought that renal disease might be held responsible for certain affections of the ear, as it was known to be for those of the eye already referred to. Albuminuria in Bright's diseases he was inclined to regard as an instance of Nature's conservative action, the kidneys relieving the blood of an excess of albumen. The question of climatology in these affections he deemed one of great importance. He had discussed it quite fully in a paper recently presented to the Academy, containing reports of 308 cases; and his statistics upon this point, to some of which he referred, might prove of value. A favorite mode of treatment in the Bellevue and New York Hospitals was the use of the hot-air bath, in conjunction with spts. mindereri and ipecac., inducing profuse diaphoresis and diuresis.

Dr. NEFTEL remarked that the prognosis in Bright's diseases depended very much upon the diagnosis of the special form we had to deal with, and this could often be pretty accurately determined. For instance, it was not very difficult to distinguish amyloid degeneration from the other forms, taking into account the clinical history of the case. This form of degeneration of the kidney might be caused by constitutional syphilis, tuberculosis, caries, and necrosis of the bones; or, lastly, chronic ulcers of the limbs. Prof. Fischer, of Breslau, had shown that chronic ulcers of the legs, if allowed to persist unhealed, invariably led to amyloid degeneration of the kidney. Hence the cure of such ulcers became a matter of great importance; and we had the means of effecting it in Langenbeck's continuous bath, electrolysis, etc. In amyloid degeneration the urine was peculiar, having a high specific gravity and a very dark color. It contained the special coloring principle, indican, which could be extracted by appropriate means. Under treatment with strong sulphuric acid, but without the addition of sugar, this gave the same play of colors as the biliary acids under Pettenkofer's test. In illustration of the certainty of diagnosis, the speaker referred to the case of a man who had come to him for heart-disease. This was set aside by the examination, and the patient pronounced to have amyloid degeneration of the kidneys. He afterward went for treatment to Heidelberg, where he died, the *post-mortem* confirming this diagnosis.

A test for albumen, more delicate than those commonly employed, was identical with Trommer's test for sugar. Some specimens of albuminous urine would yield no precipitate with heat or nitric acid; but, on treating them with a solution of sulphate of copper and potash, the supernatant liquid, after the subsidence of the precipitate, would be left of a beautiful and characteristic purple color. The presence of grape (diabetic) sugar did not interfere with this test; so that both sugar and albumen might be tested for at once, the sugar being shown by the cuprous oxide, and the albumen by the purple color.

As to the treatment of Bright's diseases, in Russia, the speaker's own country, the milk-cure had found great favor—the patient drinking milk in large quantities, and taking no other food or medicine. The results of this plan were often wonderful, the patients greatly improving, and the albumen disappearing from the urine.

Dr. PEASLEE had listened to the paper with much interest, as showing how great progress had been made, even within a very brief period, in our knowledge of renal diseases. He thought, however, that the nomenclature was still defective. The phrase "tubal nephritis" should be discarded, as synonymous with "acute desquamative nephritis;" and the transient affection denoted by it should be struck from the catalogue of Bright's diseases, from which it differed as much as pleurisy or pneumonia from phthisis. As to climate, it was probably credited with much that did not belong to it. For instance, there could hardly be so great a difference of climate between Paris and London, as to account for the reported difference in the prevalence of Bright's diseases.

Dr. CARO (?) thought that the influence of climate, whether for the production or for the palliation of Bright's diseases, had been greatly exaggerated. The effects attributed to it were doubtless in great measure due to the habits of the people in different countries with regard to the use of wines or stronger liquors. He had noted this in Italy, where the Neapolitans were addicted to strong spirits, and were more subject to Bright's diseases than the residents in other states, under the same conditions of climate, where wines were drunk almost exclusively.

Dr. A. H. Smith, during three years' quite extensive practice, both civil and military, in New Mexico, had found but one case of albuminuria, although there was a large amount of very bad whiskey consumed there. The climate of that region was peculiar in being exceedingly dry.

Dr. Hanbury Smith could say that in Sweden, during his long residence there, he had found Bright's disease occurring almost exclusively among those accustomed to the use of distilled liquor. Deaths from this cause were frequent in hospital. But among the better classes, where wine was the ordinary stimulating drink, the disease was much rarer. The race and habits of life of a people were quite as important etiological elements as climate. Whatever their cause, the peculiarities of the Scandinavian race were strongly marked. On one occasion, in an examination of many thousand children, in the orphan asylums, he had been unable to find a solitary instance of true scrofulous diathesis. Again, he had never seen a case of gout in a true Scandinavian. On the question of climate, it was not to be forgotten that a large proportion of the inhabitants of northern countries pass the winter months in an artificially warm climate, with close double windows, and an unvarying heat from porcelain stoves. He had himself suffered more from cold in a single winter in Ohio, than in the many he had passed in Stockholm.

Dr. O'Sullivan thought that the use of the sparkling wines was prophylactic.

The President said that this matter of the effect of climate on renal diseases was one of the great questions to be determined in the future. As bearing on the value of statistical results, it was necessary to learn whether examinations of the urine were as faithfully and thoroughly made in some cities as in others, both in the hospitals and in private practice, which was always influenced by that of the hospitals. And if it were proved, as doubtless it would be, that climate is a powerful agent in these diseases, had we not within our power, as already suggested, such control over climate as to give our patients its greatest benefits without sending them from home? Could we not, by the more systematic use of the Turkish and the Russian bath, established in our hospitals, and brought into our houses, produce that increased action of the skin which would be insensibly brought about by the change to a warmer climate, and so realize its chief advantages? Let the experiment be carefully tried in a hundred cases, and it would go far toward settling the question.

The milk-treatment, spoken of by Dr. Neftel, ought certainly to command general attention. Patients who had given over every other form of treatment, came to this with results almost incredible.

In conclusion, the speaker would express his yearly strengthening conviction that a favorable prognosis might, much oftener than he had once supposed, be made in cases of albuminuria in puerperal convulsions. Though successive pregnancies should exhibit severe convulsions, with the urine highly albuminous and of low specific gravity, yet at the end of twenty years' hospital practice he felt that, if the patient could only be carried well through the labor, the prognosis was much better than, five years ago, he should have dared to hope. He had followed a large number of such cases through.

Dr. JOHN O. STONE could indorse the President's remarks concerning puerperal albuminuria. He had made a point of following up all such cases as had occurred in his practice; and he deemed this very important, that the profession might have the benefit of trustworthy statistics of the results. He would mention one striking case. Ten or eleven years ago he was suddenly sent for to visit a woman in confinement. All pains had ceased, and her medical attendant suspected rupture of the uterus. She was terribly exhausted, and had lost the sight of one eye. The urine showed abundance of albumen. The patient was stimulated, and the baby was born, but died soon after. The woman then came under the speaker's care. For six years she had albuminuria; but for the last four years this had not appeared. She had not again become pregnant.

The Society then adjourned.

Dr. BROWN-SÉQUARD will not enter upon the full duties of his chair of Comparative and Experimental Pathology in Paris before November next. The Government has decided to build a *laboratoire* for him, near the School of Medicine in the garden of the *Hôpital des Cliniques.—Sci. Opinion.*

Reviews.

Art. I.—*A Practical Manual of the Treatment of Club-foot.* By Lewis A. Sayre, M. D., Professor of Orthopedic Surgery in Bellevue Hospital Medical College, etc., etc. New York: D. Appleton & Co., 1869; pp. vii.–91.

Art. II.—*Cases in Orthopedic Surgery.* Read before the Massachusetts Medical Society, at its Annual Meeting, June 3, 1868. By Buckminster Brown, M. D., Fellow of the Society, etc. With Photographic Illustrations of the Cases presented. Boston: James Campbell, 1869, pp. 23.

These two little works are of such different scope, that to include both in one notice might seem injudicious or unfair; but the similarity of the subjects treated of and the antagonism of the therapeutical views advanced render comparison unavoidable, and suggest some comment upon the questions raised.

The objects which Dr. Sayre had in view (as we learn from the preface) were, to prepare "a monograph illustrative of the recent advances in the proper treatment of club-foot" which should "convey, in as concise a manner as possible, all the practical information and instruction necessary to enable the general practitioner to apply that plan of treatment which has been so successful in my [his] hands, without compelling him to send his cases to some specialist, or else be dependent upon some instrument-maker for expensive, complicated, and often useless apparatus."

The "recent advances" alluded to are due, in great part, to the labors of Mr. Richard Barwell, of London, whose work "On the Cure of Club-foot without Tenotomy" was the first presentation of the question to the profession at large.

The points particularly insisted upon were—

1. The great preponderance, numerically, of paralytic deformities over those of a real spastic origin; and,

2. That the point of deformity is generally, not at the ankle-joint, but at the medio-tarsal junction, i. e., the articulation formed by the astragalus and calcaneum behind, and the second row of tarsal bones in front.

The recognition of the existence of paralytic deformities was, of course, not new, but their frequency had not been fully appreciated before—from the ignoring of the fact that the inflammatory contractions, so frequently met with, were not parts of the original disease but acquired complications. But the difference was shown chiefly in the rational treatment suggested, viz., *cure of the paralysis*, rather than simple *correction of the deformity* by tenotomy. The second point—the seat of the deformity—appears to have been less considered by former and standard writers than the question of paralysis. All the old apparatus which the reader will call to mind as figured in text books, or exhibited in the class-rooms, made the ankle-joint the main point of attack.

These, then, are the principal points in the theory in support of which Dr. Sayre has written his monograph.

The first fifteen pages are devoted to a brief description of the peculiarities of the normal foot, and of the various forms of talipes, with its causes, seat, and resultant complications. The remainder of the book is made up of the discussion of the treatment, with illustrative cases.

Though an advocate of the doctrine of the paralytic origin of talipes, the author has not overlooked the occurrence of contractures; and therefore, when speaking of treatment, does not reject tenotomy as an absolutely unnecessary or injurious proceeding, but gives full directions as to when, where, and how to make the operation; but also points out the conditions in which he esteems section to be not only uncalled for, but the main source of subsequent difficulties. In fact, the operation of tenotomy he considers rather in the light of a *preliminary* step to the essential treatment—namely, the development of the paralyzed muscles. To this last end he advocates the use of all the therapeutical agents known to be of benefit in cases of paralysis in other parts of the body, but especially galvanism, frictions, shampooing, and the like.

Under the head of dressings he describes a number of methods suited to the necessities of various cases and the emergencies of a practice at a distance from towns where orthopedic apparatus can be obtained. The only dressing which the author claims as original with himself is a club-foot shoe, on the model of "Scarpa's shoe," but with the very essential modification of a ball-and-socket joint in the sole opposite the medio-tarsal junction; thus imitating as nearly as possible the motions of that articulation. It is so arranged that elastic tubing can be applied in various places to represent and supply the place of the deficient muscles.

The work closes with some fourteen cases illustrating different forms and complications of talipes likely to be met with, the plans of treatment employed and advised as meeting the indications. Enough woodcuts—about forty—are introduced to render the descriptions of dressings easily understood, and to show the amount of success attained in the various cases detailed.

We should suppose that the book would very well satisfy the wants of the majority of general practitioners, for whose use, as before stated, it was intended.

Of the elegant little book of Dr. Brown we shall have less to say, since it consists simply of twenty cases—rather more than half being cases of talipes, and the remainder of various deformities—briefly detailed and beautifully illustrated by photographs from plaster casts or from life. From the opening paragraph we should judge that the object of the paper was to furnish to the gentlemen present at the meeting of the society an interesting *séance* rather than to give to the profession at large any instruction, based upon personal experience. The only chance for comment, then, is in drawing what inference we can from the cases themselves, and the few interspersed expressions of opinion.

From these sources we gather that the author has but very limited faith in the paralytic origin assigned to cases of talipes; at least, of the congenital forms he thinks paralysis generally causes valgus, while "it is rarely the cause of congenital varus." The far greater frequency of varus when compared with valgus doubtless makes the paralytic cases quite in the minority in Dr. Brown's classification. Very naturally, then, he is a disbeliever in the cure of talipes without tenotomy, and Cases VI. and VII. are cited as "showing the nugatory effects of protracted mechanical treatment without operation." Of the eleven cases of talipes given in the list, tenotomy was done in eight; in one it is not mentioned, and in two the patient had already in this regard "suffered many things of many physicians." The operation was also performed in some of the other cases of deformity; so, doubtless, the author regards it as nearly a *sine qua non.* After-treatment is several times mentioned, but its nature is not specified; from the context, the inference may be drawn that it consists in a variety of mechanical appliances, of which he thinks "from two to six, or even more, are often required to make a perfect foot."

One case of hip-disease is introduced, and the treatment dwelt upon at greater length than in the other cases, as is also that of torticollis.

With two works thus confronting us, entertaining such conflicting opinions, the question cannot fail to arise, Which is the proper treatment of club-foot? While it is not within the province of the reviewer to decide the controversy, he is still at liberty to point out any thing in the works under consideration which may help to elucidate the point; and in carefully comparing the two, the following have attracted his attention. The relative frequency of paralytic and spastic deformities can only be determined by the combined statistics of many observers, since individuals arrive at very different conclusions.

Doubtless, the want of agreement would be greatly diminished if cases were more carefully classified according to the time of observation. Thus, at birth, it is probable that the paralytic deformities are greatly in the majority; but, in patients who have walked for several months or years, contracture is very common; and, if this change is not considered, uniformity of result cannot be hoped for.

But, it appears certain that a very large proportion of recent cases are curable without tenotomy, and that in them the cure is more perfect, and probably is no longer of accomplishment than if section had been made.

Again, an objection to tenotomy is, that, as it only corrects the deformity without reaching the disease in paralytic cases, the cure demands muscular development, and, if, by reason of an advanced stage of disease, this cannot be accomplished, the surgeon has cut away the chief support of the injured foot. In cases where the disease is spastic, union of the tendon frequently reëstablishes the disease.

The effect of tenotomy is shown clearly in some of the photographs of Dr. Brown's cures, if the plaster casts have done him justice. Thus, Case II., double varus, although otherwise a fair success, has resulted in double flat foot. Case III., varo-dorsalis, results in a similar condition, but with marked dropping of the heel, i. e., traumatic calcaneus from tenotomy. Almost identical is the result in Case V., varus paralytica. Again, in Case X., equinus, the same accident (flat foot) has occurred.

Art. III.—*A Conspectus of the Medical Sciences, comprising Manuals of Anatomy, Physiology, Chemistry, Materia Medica, Practice of Medicine, Surgery and Obstetrics, for the use of Students.* By Henry Hartshorne, A. M., M. D. With three hundred and ten Illustrations. Philadelphia: Henry C. Lea, 1869.

At first glance, one is tempted to think that this conspectus is the "Compend" of Neil and Smith, with a new name. A careful examination, however, shows that, although on the same general plan, it varies materially from it. The order of sequence is essentially different, as will be seen by reference to its title-page. The whole work has been carefully compiled by Dr. Hartshorne, aided by Dr. Harrison Allen, Mr. William Spackman, and others whose names are not given. The manuals on physiology, chemistry, etc., are greatly in advance of the same departments in the "Compend," as they are brought down to the present state of those sciences. The same is measurably true of all the other manuals.

The book seems to have been prepared with a good deal of care to secure an accurate, lucid, and at the same time brief statement of the salient points in all departments.

Dr. Hartshorne claims that this treatise is designed for students, while attending a full course of medical lectures, when they cannot have the time to peruse more extended text-books. He further claims that it gives, in a brief and clear manner, the "indispensable elements" of a medical course, as pursued in medical colleges, and laid down in standard text-books. He claims nothing in the way of originality, but regards his labor as one of mere compilation; all individual opinion being avoided. As such, the work is perhaps as well prepared as it could be.

With this particular book we have no fault to find, but the policy of this Journal has always been averse to the class of books which this work represents. It is one of the misfortunes of the medical profession that so many of its disciples lack liberal culture. The propensity in this country to teach every thing in an easy way, "in four lessons without a master," is greatly to be deprecated. In medicine, as in other departments of knowledge, such a system has a tendency to dwarf the mind, and make it the agent of mere routine.

What medical students need is a course of systematic recitations, in well-elaborated, graceful text-books. And this study, unless done at some time other than during attendance on a course of public lectures, will never be done at all. The student who is attending a full course of lectures cannot, as a matter of course, have much time for study; and such a book as the "Conspectus" at such a time is wonderfully convenient. The danger is, that, if he depends on it then, he will be contented with it at other times; and thus become a man of limited, fragmentary knowledge, with nothing of that large liberal culture within the reach of all, but attained by so few.

Could this book be kept out of the hands of the student until just before his final examination, and then be given to him for the purpose of impressing on his mind the salient points in medicine, it might serve a good purpose. With the risk, however, that he may come to depend upon it, to the exclusion of other text-books, we fear that such an epitome may in the end do more harm than good. Entertaining these views in general, we do not deprecate this particular book, but all books of its class.

So far as Dr. Hartshorne's "Conspectus" is concerned, we doubt not it is the best of its class, whether we have regard to the method in which the work has been done, or the admirable letter-press of the publisher, Mr. Henry C. Lea.

ART. IV.—*Researches on the Nature and Treatment of Diabetes.* By F. W. PAVY, M. D., F. R. S., Senior Assistant Physician to, and Lecturer on Physiology at, Guy's Hospital. Second edition, revised and enlarged. London: Churchill & Sons, 1869. 8vo, pp. 297.

THE first edition of this work, published about seven years ago (1862), was favorably received by the profession. The present one has been remodelled, and in great part rewritten, and much new matter added. The author states that no pains have been spared to produce a more useful treatise upon diabetes to the medical practitioner. Dr. Pavy is a working physiologist and an original investigator, and this volume is largely the result of his own observations, physiological, chemical, and clinical. It is to be regretted that there is no table of contents nor index, which will make frequent consultation of its pages with reference to any particular point irksome.

The first section is "On the Detection and Quantitative Determination of Sugar in the Urine." An exact knowledge of the amount of glucose is necessary, not only to decide upon the existence of the disease, but also to ascertain the effect of treatment. The want of accuracy in urinometers, unfortunately not infrequent, may cause serious mistakes in detection by misrepresenting the specific gravity of the urine; and, indeed, correctly registering instruments may sometimes mislead; an instructive case bearing on this point is given by the author, where, with emaciation, thirst, and an excessive quantity of urine, the instrument marked a sp. gr. of 1036, and yet, on applying a chemical test, no trace of sugar was to be found. Hence a chemical examination is invariably necessary. In estimating the precise amount of glucose present, the specific gravity test is a still more fallacious criterion, as shown by the constant want of harmony between it and other exact processes of valuation, for "there are other principles in diabetic urine to influence the sp. gr. besides sugar, and it is often found that specimens presenting the same or about the same sp. gr. are charged with widely different quantities of sugar; and, moreover, specimens are sometimes met with in which the amount of sugar differs, and it may be even to a considerable extent, in an inverse ratio to the density" (p. 26). The *cupro-potassic* solution test—a modification of Fehling's, caustic potash being substituted for caustic soda—Dr. Pavy believes gives not only the quickest but the most correct result, the sugar being estimated by its reducing effect upon the test solution, which is of an ascertained strength—in fact, by volumetric analysis. Zwenger's nitrate of silver test is not mentioned, nor that of Mulder, by indigo alkalinized with carbonate of soda, which is a very sensitive one, and with hardly any chance of error. Jaccoud has simplified the latter process by first adding to the suspected urine a few drops of the indigo solution, then heating it, and at the boiling-point, the blue tint being intact, adding the soda in warm concentrated solution, when, if sugar be present, instantly the characteristic yellow hue, resembling closely that of the liqueur known as Chartreuse, appears, without any cloudiness (*Leçons de Clinique Médicale*, p. 865). The loss of weight in a saccharine fluid before and after the destruction of its sugar by fermentation has been ingeniously utilized by Dr. Roberts, of Manchester, and a simple quantitative analytical process founded on it which yields a correct and constant result, and is so simple of application that it may be done by the patient himself, its only drawback being the time spent. After having first taken the sp. gr. of a specimen of diabetic urine, it is fermented by means of yeast, and, after twenty-four hours, when the fermentation has ceased, the sp. gr. is again noted; the density after fermentation is subtracted from the density before, when the "density lost" is ascertained, and the number of degrees of "density lost" indicates as many grains of sugar per fluid ounce; the amount of glucose being determined by the weight of carbonic acid lost. Mr. Hensley (St. Bartholomew's Hospital Reports, vol. iii.) has attempted to point out the possible errors of this method, but his objections practically amount to nothing, the only real one, the inaccuracy of the urinometer used, being overlooked.

The next section, "On the Physiological Relations of Sugar," is of great interest, treating of glycogenesis, a subject which has excited so much interest from its physiological and pathological bearings, and with which Dr. Pavy's name has been prominently associated, by his denial of the correctness of Claude Bernard's liver-sugar theory. In 1849 the French physiologist announced his discovery of the glycogenic function of the liver, and in 1857 the isolation of the sugar-forming material, the recognizable source of the sugar in the liver, a substance analogous to starch in its composition and properties, named glycogen by Bernard, and now more generally called amyloid substance, and which has for its seat in the liver the hepatic cells. Dr. Pavy, originally a strong believer in, and supporter of, the glycogenic theory of Bernard, after experimental researches begun with quite a different end in view from what was arrived at, found himself "compulsorily led, by the unlooked-for evidence that presented itself, to stand forward as an opponent to it." He contends that the evidence, upon which the liver is supposed to have a sugar-forming function, is based upon conditions met with after death. It is not that there is any thing incorrect about Bernard's experimental results, so far as the results themselves are concerned, but that his conclusions are not strictly warranted by his facts. Drs. Harley, Thudicum, and Beale, object to Dr. Pavy's experiments as inconclusive, while they have been repeated and accepted by McDonnell, of Dublin, and by Schiff, Meissner, Jäger, Herzen, and others on the Continent.

In the JOURNAL for January, 1869, Dr. Austin Flint, Jr., published a series of experiments on the glycogenic function of the liver, made with a view of harmonizing the views of Bernard and Pavy. Since 1858, Dr. Flint had in his class-demonstrations confirmed Bernard's results, and he believes that, though Pavy's observations are accurate, his interpretation of the facts is erroneous. A correct reading of his own experiments will, he thinks, bring agreement between the French and the English physiologist. During life, he avers there is no sugar to be found in the liver, only glycogenic or amyloid matter, because the great mass of the blood passing through the organ washes away the sugar as soon as it is formed; but, after death, or when the circulation is disturbed, the transformation of amyloid substance still going on, while the product is not removed, sugar is detected. Our readers have had the opportunity of judging whether the American physiologist has brought peace to the hostile camps; as to the demonstration, we acknowledge, like Gulliver, after seeing the several experiments of the philosopher of the grand academy of Lagado, we are "not skilful enough to comprehend."

Schiff assigns to the liver a passive part in connection with glycosuria, looking upon that organ as the seat whence the sugar proceeds; and its non-production during life and its presence after death are to be ascribed to the absence or presence of a ferment in the blood, the development of this ferment taking place immediately after the extinction of life, or when during life the blood is in a stagnant state, or its flow through the vessels retarded (*Journal de l'Anatomie et de la Physiologie*, 1866). Our author's experiments do not confirm the statements of the Florentine physiologist.

Amyloid matter is contained in the hepatic cells, and any escape into or admixture with the blood gives rise, according to the author's experience, to a saccharine condition of the circulating fluid. How is it, then, that this amyloid substance does not constantly pass into the blood, which is continuously in such close proximity, and thus contaminate the system? Dr. Pavy's explanation is, that it is the physical property of non-diffusibility of this substance which hinders this liability to glycæmia:

> "Had we," he writes, "in the amyloid substance a principle to deal with holding the position of sugar as regards the property of diffusibility, the blood could not circulate through the liver without carrying it away. In wise harmony, however, with the requirements of the case, this substance belongs to the group of colloids or non-diffusible bodies. On placing a mixture of sugar and amyloid substance together in a dialyzer, the sugar will be found to diffuse, while the amyloid substance remains behind" (p. 121).

Albumen, too, has a low degree of diffusibility, and its retention in the blood-vessels provided for:

> "There would be a want of harmony in the circumstances of the case; if a material intended to serve as a pabulum for the nutrition of the tissues, and, therefore, required to be retained in the system, should have a tendency, like, for instance, sugar and urea, to escape from the blood by being

endowed with the property of diffusibility. And so with regard to the amyloid substance of the liver; its want of tendency to diffuse may be taken as affording in a converse way presumptive evidence that it is not intended to pass from the hepatic cells into the circulation" (p. 121).

The section on Pathology is not very satisfying; it lacks breadth, and throws no new light on the vexed subject of the genesis and nature of the disorder. Since Cowley, in 1778, first isolated saccharine matter in diabetic urine, the presence of sugar in urine has come to be considered the essential feature of the affection. Notwithstanding the experiments and assertions of Schunck, Brücke, and Bence Jones, it is improbable that glucose, even in minute quantity, is a natural constituent of the urine, though Dr. Pavy accepts their statements, and founds upon them an argument against hepatic glycogenesis. That sugar is met with occasionally in the urine, and in notable quantity too, without full-developed diabetes, must be admitted; but this is most likely due to some assimilative trouble, for Lehmann and Uhle have shown that, when the blood contains only 0.6 per cent. of sugar, there is appreciable glycosuria. Only when this is excessive and persistent, it will maintain a condition of glycæmia, which gives rise to the well-known and well-marked group of phenomena which tokens diabetes:

> "There may be a temporary appearance of sugar in the urine, without diabetes mellitus existing. Thus, glycosuria, which simply signifies passage of sugar with the urine, is not synonymous with diabetes. Every case of diabetes mellitus is necessarily one of glycosuria, but the converse does not hold good—that is, glycosuria may be encountered without the existence of diabetes" (p. 124).

Sugar will be found in the system after violent muscular efforts, and under vascular congestion from obstructed breathing. Reynoso first pointed out that, after the inhalation of ether and chloroform, a certain amount of sugar is met with in the urine, and referred it to diminished activity of the respiration. Dr. Pavy gives an interesting table of twenty cases, taken indiscriminately, operated on in Guy's Hospital, and to whom chloroform had been given, where the urine was tested with the copper solution. In most, the reaction after the inhalation of the anæsthetic was considerable, and in some quite strong; in one there was no effect, but in this case slight saccharine reaction was noted before chloroform was given.

One of the arguments brought forward in opposition to the glycogenic theory is the result of applying a ligature to the portal vein, so as to cause the liver to be permeated only by a current of arterial blood. In such cases, both the liver and the contents of the circulatory system have become strongly saccharine. "If," says Dr. Pavy, "sugar were produced and discharged from the liver as one of its functional operations, it is hardly reconcilable that, upon arresting the principal stream of blood through the organ, the contents of the circulatory system should be found in so much more highly saccharine a state than under ordinary circumstances. What it appears we are justified in saying in explanation of the effect produced by this operation is, that, with a supply of arterial blood only, the changes in the liver fail to proceed in their natural manner, and that the amyloid substance in consequence undergoes a downward metamorphosis into sugar, like what occurs after death, or also under certain other unnatural states during life" (p. 153). The real value of this experiment seems to us to be its important bearing upon the influence the nerves have upon the sugar-forming and sugar-destroying processes, and to show that it is indirect, through their control of the calibre of the arteries, and therefore upon the quantity of arterial blood sent to the capillaries, as against any direct influence they may exert; a view which Dr. Beale inclines to as the most likely one.

Dr. Pavy's own experiments (Guy's Hospital Reports, 1861) show that the introduction of the phosphoric acid of the pharmacopœia into the system, either directly by injection into a vein, or through the alimentary canal, will give rise within an hour's time to strongly-marked glycosuria.

Our author thinks it may be considered, that it is to the liver we are to look as the organ which forms the sugar, which in diabetes appears in the blood, and thence is discharged with the urine. This is rather a narrow view of the pathogeny of the disorder. All the physiological theories which localize the production of the glycogenic matter, though based on well-observed facts, seem to us to break down when the attempt is made to give them a pathological application; brought together and critically examined as to the light they shed upon the essential nature of the disorder, they give way by a process of disintegration. We will not discuss the gastro-intestinal, or pulmonary, or analkaline theories, or the effect of traumatism of certain portions of the nervous system, but will give a moment's attention to the hepatic theory. This latter asserts that the liver is exclusively at fault, and that diabetes is only an exaggeration of a healthy function. It should be remembered that glycogen is not found in the liver only; it is diffused, and met with in the tissues of the body generally, as shown by Binder, Jansen, and Rouget; in diabetes the presence of sugar in the blood—the state of glycæmia—which is an essential and constant condition, is due to its excessive and unnatural production in the economy; how this happens is still a mystery; but there is as yet no proof that this extraordinary saccharine metamorphosis is bounded by the liver; on the contrary, there is much against it. The recent observations of Leo Maly, Böcker, Mosler, Thierfelder, and Uhle, show a large increase in the quantity of creatinin, and of the sulphates and chlorides, in the urine, and teach us not only that the presence of sugar is not the single characteristic of diabetic urine, but that there is a serious disturbance of the function of nutrition as a whole, and not of any one fractional part. And this is made still more likely when we look at those cases in which an excess of urea is present, which cannot be accounted for by the quality of the food taken, starch and sugar having been rigorously excluded; and Jaccoud has properly insisted upon the rapid wasting in such instances, so conclusively shown in Dr. Sydney Ringer's observations, as due to azoturia; the source of the urea being a continual disintegration of the tissues, and the unhappy patient living as it were upon his own substance—a genuine state of autophagism. The early nutritive error would seem to be more an imperfectness in the assimilative processus than any intemperance of production of a natural product—amyloid matter, or zoamylin; or the presence in the blood of an accidental factor—a diastatic ferment, as Schiff has suggested. Dr. Pavy, in a few lines in the short section on Etiology, has a nearer glimpse of the probable pathogenesis of the affection than any thing that may be found in the seventy pages he has devoted to its pathology:

"The idea, in fact, has occurred to me whether a certain state of the digestive canal may not, by reflex action through the sympathetic system, occasion diabetes" (p. 198).

In diabetes there is no constant or characteristic lesion. The observations of Griesinger show that of all the organs the kidneys are most frequently diseased (thirty-two times in sixty-four autopsies), and in seventeen of these the tissue-changes were those of Bright's disease; but whether the coincidence of the two conditions is accidental, or the renal affection is due to the altered quality of the urine, is not determined; most likely it is caused by the general nutritional fault with which both diseases are connected. Dr. Griesinger found the liver most frequently healthy, occasionally atrophied, and only two or three times hypertrophied, or congested. The pancreas seems to have been generally overlooked by observers. Dr. Pavy calls attention to one point in the morbid anatomy of this affection, namely, the nature of the pulmonic complication. This common concomitant of diabetes is usually spoken of as phthisis, and its symptoms and course are those which it is the habit of regarding as indicating tuberculosis. But such is not the case; there is no tubercle, but a nutritional change in the lung-tissue (the pneumonic phthisis of the late Dr. Addison, the caseous pneumonia of Niemeyer), which ends in its breaking down and to the formation of cavities, or in gangrene, which Scott and Monneret first stated was without the characteristic odor, a fact since confirmed by others.

The chapter on "Etiology" has some interesting facts respecting inheritable susceptibility to diabetes; and in several cases Dr. Pavy is convinced that he has been able to trace the complaint to mental anxiety, or over brain-work; there is no doubt that these influences aggravate the disease when it exists.

In the following section the "Symptomatology" is carefully, clearly, yet concisely, stated, and from a large personal experience.

The concluding section is on "Treatment." All the various theories, which are, or have been, in vogue, of the pathogenetic processus in diabetes are practically sterile, so far at least as they have any therapeutic bearing or significance.

The author's pathology is warped by his physiology, and his therapeutics partake strongly of this bias, and fall vastly short of the broad and essential principles which should govern the treatment of the disorder. "In no complaint," says Dr. Pavy, "have we so clear an indication as to what is to be done as in this. In diabetes in particular, the management of the case is open to rational principle for our guidance." And again: "The object, it will be readily conceded, to be kept in view in the treatment of diabetes, is to place the system of the patient in a state as closely approaching the healthy standard as possible." This truism no one will gainsay, even if extended to the treatment of disease generally. The question in the disorder under consideration is, how may this best be done? Rollo first suggested an exclusive animal diet, and English physicians from the day of Prout have insisted that to abstain from the particular element of food which fails in the diabetic to be utilized forms the rational course to adopt to assist in accomplishing the object; and Dr. Pavy adds, "fortunately, the withdrawal of this alimentary principle from the food does not in itself entail any injurious consequences." To these propositions we cannot give an unqualified assent. In such cases where a rigid exclusion of the carbo-hydrates from the food is borne, and is followed by much lessening, or even the total disappearance, of saccharine matter from the urine, and does not aggravate general denutrition, this plan of treatment may be to a certain degree successful; so far at least as subduing, or even temporarily removing, a prominent symptom of the affection. But the truth is, that this restricted diet is not long tolerated by most patients, and does entail injurious consequences, and, moreover, does not reach the root of the evil. Except in the earliest stage, it is opposed to the great underlying true principle of treatment of this complaint—the maintenance of the integrity of the assimilative processus as much as is possible, and hindering the constant tendency to devitalization.

With Dr. Pavy's views, it is not surprising that this chapter is chiefly given up to the consideration of the proper dietary of the diabetic, and that rational treatment gets but scant notice in a few lines at the end on Bouchardat's method of enforcing hygienic conditions, but without any indorsement. Now, we venture to assert that a case of diabetes in youth or middle life has the best chance of being substantially, or perhaps permanently, bettered by being permitted a properly-adjusted diet of mixed food, with limited restriction of harmful articles, close attention to the state of the skin, daily muscular exercise short of fatigue, mental rest, and such other means as will uphold the strength and heighten the well-being of the body generally.

Of drug-treatment, Dr. Pavy thinks "it may be concluded that benefit is derivable from the administration of alkalies. General experience tends strongly to justify the conclusion that alkalies exert a controlling influence over the morbid condition prevailing in diabetes." Every day brings additional evidence in favor of the persevering use of small doses of alkalies in this disorder. Not only under the use of soda is the amount of sugar in the excretions lessened, but digestion improves, intestinal troubles abate, and the bodily condition gains vigor. Jaccoud says in his late work already quoted: "Whatever may be the value of the theory which has suggested their use, the fact is certain of the usefulness of alkalies in diabetes." Durand-Fardel earnestly advocates them, and clinical experience at Vichy has given him good opportunity to test their value.[1] Dr. Pavy states (p. 271) that, in one of his cases where he gave daily enormous doses of the alkalies, the urine did not acquire an alkaline character, and speaks of this "as worthy of remark," and as "constituting a striking and peculiar circumstance specially belonging to diabetes." He has overlooked the statement of Dr. Roberts, that in his cases he had no difficulty in rendering the urine freely alkaline in diabetes ("Urinary and Renal Diseases," p. 206).

Our author thinks that "there is one remedy for diabetes which has not yet received the full trial it deserves," and that is opium. He further says:

---

[1] Dr. William R. Basham has lately published (*British Medical Journal*, April 10, 1868) some observations on the successful treatment of diabetes by alkalies, with limited restriction of diet.

> "In a case which has been under my care in Guy's Hospital, during the past summer (1868), and the details of which I purpose laying before the profession through another channel, the patient has been entirely relieved of her disease by the influence, *and the influence only*, *of opium*" (p. 274).

The case was read before the Clinical Society of London, and afterward published in full, and in the record we find these words: "*Bicarbonate of potash and aromatic spirits of ammonia continued throughout the patient's stay in hospital.*" Here is the influence only of opium! A thorough alkaline course throughout the treatment. Such, too often, are therapeutic facts. It is worthy of remark that, in this case, there was no restriction of diet.

The inhalation of oxygen, recommended and used by Dr. Bérenger-Féraud, has hardly yet had trial enough to warrant any opinion of its value. Dr. Pavy's experience with the peroxide of hydrogen, as a specific in the disorder, both before and since the publication of this work, is entirely unfavorable; and we notice that Dr. Richardson, at one time its advocate, has given up any belief in its efficacy.

A report of a case, showing the influence of various articles of food upon the elimination of sugar in diabetes, is appended.

Bibliographical and Literary Notes.

DIE Addison's che Krankheit. Eine Monographie von Dr. H. Averbeck, praktischen Arzte in Bremen. Erlangen. Verlag von Ferdinand Enke, 1869. pp. x.–114. [From the Author.]

Addison's Disease. A Monograph by Dr. H. Averbeck, Practitioner of Medicine, Bremen. Erlangen. Ferdinand Enke, 1869.

Dr. Averbeck has made a very thorough analytical study of the recorded cases of this disease, and has combined it with the clinical record of a few cases which he has himself observed. After a short historical sketch of the literature of the subject, he divides his work into three parts: "Addison's Disease—a Clinical Study;" "Bronze Disease and Bronzed

Skin—a Diagnostic Study;" and "the Supra-renal Capsules, and their Relation to Addison's Disease — a Pathological Study."

The first part is the discussion of two hundred and thirty-seven cases, which are carefully divided according to the presence or absence of complications, the confirmation of diagnosis by *post-mortem* section or not, etc. The conclusions of this "study" are, in brief, that the *cortége* of symptoms constituting Addison's disease have anatomical conditions, chronic inflammatory processes of the supra-renal capsules, which are not accidental, but essential and primary. The affection of the supra-renal capsules occurs on both sides, and simultaneously. There is no constant blood-change proven. The discoloration is limited to the skin and buccal mucous membrane, and is due to a deposit of granular pigment in the deepest cell-layer of the rete Malpighii. No internal cause can be discovered for the disease, and an extraneous origin must be sought for it.

The second part is devoted to the differential diagnosis of Addison's disease, especially from pseudo-bronze disease.

The conclusions of this section are as follows: 1. Diseases of the supra-renal capsules are not rare; the most frequently observed are chronic inflammatory processes and cancer. 2. Addison's disease occurs in conjunction with the inflammatory processes alone. 3. But the clinical history of Addison's disease is not observed in all cases of chronic inflammation of the supra-renal capsules.

The conclusions arrived at by the "pathological study" are nearly the same as in the first part.

Finally, he discusses as untenable the supposition that Addison's disease depends upon malarial, syphilitic, scrofulous, or tubercular cachexia, or that it should be considered as one of the neuroses. It is, he maintains, a disease *sui generis*, and demands for its proper comprehension and explanation the supposition of a specific poison, which manifests itself in the local lesion just as malaria does in the spleen, or syphilis in the lymphatic glands. In closing, he throws out, for the consideration of future observers, the suggestion of the possible transmissibility of Addison's disease.

We have been favored from the press of Messrs. Johnson, of Philadelphia, with an inspection of the advanced sheets of an important work, by Dr. John Ordronaux, Professor of Medical Jurisprudence in the Law School of Columbia College, New York, entitled "*The Jurisprudence of Medicine, in its Relations to the Law of Contracts, Torts, and Evidence.*" In this work, the author has supplied the medical profession with a most valuable friend and guide, in deciding all legal questions which relate in any way to the practice of medicine. The first part contains *The legal status of Physicians—the nature of their contract with Patients; the duties of Patients; Fees and Remedies at law of Physicians*, together with their liabilities for *malpractice.*

The second part exhibits the whole *Philosophy of Medical Evidence, and the rights of Physicians as Experts.*

The third part contains *all the statutes of the various States of the Union bearing in any way upon the practice of Medicine.*

The fourth part is devoted to the *Ethics of Medicine.* And the fifth part contains the *Jurisprudence of Pharmacy*, a subject never before written upon in this country, as, indeed, may be said of most of the topics discussed by Dr. Ordronaux, in this work. In this last part the rights and liabilities of apothecaries are discussed in three chapters of exhaustive character. The whole work has been written in the most careful and critical manner, and under the light of well-received and undisputed legal adjudications. It may be said, in fact, to bristle all over with legal authorities, and 300 cases cited in the volume, and extracted from American, English, and French law-reports, attest the patient research, the long, systematic comparison of decisions, and the critical care with which every principle advanced has been supported as well as illuminated. The value of such a work to any profession is best known to those who, in times of need, have sought in vain for a reliable guide to their rights when invaded, and their remedies when obstructed. And many questions not heretofore brought into the field of legal discussion, by reason of their exceptional character and the absence of any precedents under whose light they could be read, are here most thoroughly ventilated.

Nothing has been omitted that can render the work serviceable of its kind to physicians in any part of the United States; being in fact a legal repertory of their rights and remedies, under all circumstances of practice.

A MEDICAL CURIOSITY.—As if to rebound from the hard and dry digging of preparing the "Jurisprudence of Medicine," Dr. Ordronaux announces, through Messrs. Lippincott & Co., another forthcoming volume, whose very name will bring a glow into the heart of all lovers of classical medical literature. It is a translation in English verse of the celebrated "*Code of Health of the School of Salernum*," a rhyming Latin poem of the middle ages, which had already passed through over one hundred and sixty editions. From the circular which lies before us, we can only say that the specimen pages show how difficult has been the task of converting into English verse this remarkable poem, and how faithfully the spirit as well as the letter of the medical dogmas enunciated in it have been rendered by Dr. Ordronaux. His translation is close, clear, and accurate, and combines the difficult unities of being metrical, medical, and pointed. We shall hail with pleasure the appearance of this old friend in, for the first time, an American typographical dress. Surely the fame of Salernum has indeed circumnavigated the globe, since even America now comes to do homage to this old medical mother.

BOOKS RECEIVED.—Self-Enervation: its Consequences and Treatment, by C. S. Eldridge, M. D. Chicago: C. S. Halsey, 1869.

Cases in Orthopedic Surgery, read before the Massachusetts Medical Society, at its annual meeting, June 3, 1868, by Buckminster Brown, M. D., Fellow of the Society, etc. With Photographic illustrations of the Cases presented. Boston: James Campbell, 1869.

Photographs of Diseases of the Skin, taken from Life, under the Superintendence of Howard J. Damon, A. M., M. D., etc. Boston: James Campbell, 1869.

Selection.

Aims of Modern Medicine.[1]—The title of the above-named work might lead some of the unprofessional public to the idea that physicians, or at least certain physicians, were putting forth a confession of faith, which would claim to be a test of orthodoxy on the subjects with which it deals. It might be hoped, by such as would fain have all their affairs conducted on established principles, that here was at length a body of "Articles," a "Westminster Confession," a "Longer Catechism" of medical matters, which might be a touchstone to try the judgments of their own domestic doctor, or the consultant whose name has been so eagerly pressed upon them by anxious friends; while those, in whom the Anglo-Saxon instinct of dissenting opposition is warm, might fly to it to learn what are the banners against which their arrows should be levelled. Others might suppose it to be on the plan of the well-known "Système de la Nature," and to be a professed exponent of the harmony which binds all its parts into one consistent whole. These, and even some more, reasonable expectations would be disappointed; for never, probably, did an encyclopædic work less aim at fulfilling them. It appears to be the first of its class which has deliberately eschewed all "general articles," as they are technically called, which usually act the part of bridle and spur to keep the author in the road which the editor would have him travel.

The word System, as here used, is limited to the very first meaning which its derivation suggests; it implies simply the *putting together* in these two first volumes one hundred and eight original essays by thirty-seven authors on given subjects; and the energies of the editor, except where he appears in the character of a contributor, have been expended in arranging the independent contributions, preventing repetition and overlapping, or struggling against the greedy claims for space made by some fanatics for their own offspring. In this he has not been idle, for we can trace scars, if not open wounds, made by the pruning-knife. But he has not, at least in print, indulged himself in the more interesting, if more hazardous task, of pointing out what, if any, harmony exists between them; of determining whether, in acknowledging a common aim, they take common paths toward that aim; and whether, and in what characteristics, such paths are preferable to those followed by their predecessors.

This reticence of the editor gives a peculiarly happy opportunity to those desirous of forming a true notion of the position of medical science in the present day. For, if we can trace any harmonies, we may be sure they are the unintentional expression of the inner soul. The writers are on no platform or stage, and the methods of treatment are not selected or rejected as representing by their features a particular part. And in their multitude also, there is much safety for him who would use the volumes as historical landmarks. They represent their generation, not merely the idea of an individual. One finds in the genuine writings of an Hippocrates and of a Van Helmont, anticipations of nature which have lain dormant for centuries; these are the man's own sentiments and nothing more; for a hero is in advance of his contemporaries and not the outcome of the general feeling and tendency; but it is the "Hippocratici," the contributors of the imitated works of their master, who are the truly representative men.

We must also, on the same grounds, thank the editor for not having selected, as contributors, men who have acquired reputation among the public for the application of special modes of practice, or the treatment of special diseases. His fellow-workers are nearly all teachers of general medicine at general hospital schools. Thus a breadth of view is attained which is missed by those who carry to excess the principle of a division of labor in intellectual work. Our thanks are all the more due, inasmuch as he takes this course in opposition to a tendency of certainly a majority even of otherwise sensible persons, who seem still as much as ever disposed to favor specialties. We remember a farmer's wife not fifteen miles from London, who, when her husband was gored by an ox, took him to a cow-doctress, instead of the village surgeon, because the latter, as she said, "knew nothing about animals." But was she really a juster subject for ridicule than a noble lady, her neighbor, who regularly visited three London physicians, one to prescribe for her nerves, another for her lungs, and another for her heart? One is reminded of the German or Flemish peasant, who in bodily suffering selects the saintly "Noth-Helfer" to whom he should pray for aid, flying to St. Anthony for erysipelas, to St. Martin for small-pox, to St. Vitus for nervous diseases, to St. Barbara for toothache, and the like, not expecting help unless he applied at the right shrine among the fourteen "helpers in need." It is a pregnant fact that among these spiritual specialists are included none of the thoroughly educated denizens of the Calender, St. Luke, St. Cosmos, or St. Damian, who may therefore be taken as the types of the class chosen to represent therapeutics by our editor. A conviction of the unity of the body, and of the intimate relation to one another of all its defects and ailments—the doctrine that "if one member suffer, all the members suffer with it"—is necessary to the free progress of medicine.

---

[1] A System of Medicine. Edited by J. Russell Reynolds, M. D., London. Vol. I., 1866; Vol. II., 1868.

Let it be understood that by Medicine we mean the art of preventing and healing sickness, and not merely those handmaiden studies which the vulgar include as medical matters, anatomy, chemistry, physiology, etc., nor even the natural history of disease. Doubtless an opportunity is thus passed over of decorating our pages with much interesting material, but, on the other hand, the mass would become too vast for fair treatment in a review. At the risk of what we say being skipped as mere "doctor's stuff," we will adhere to the strictly technical aspect of the subject.

Yet are we not too precipitate in assuming such matter for thought to be uninteresting to the public? Do we not all, simple and professional, dabble a little in the art of cure? Do we not feel a curiosity to know on what grounds this or that drug, why sometimes no discipline, sometimes severe discipline, is imposed upon us by our medical advisers? Do we not ask whether the whole thing be not a dramatic performance, got up to amuse, while we take our chance of life or death, or suspect it of being a hap-hazard handling of a two-edged sword? Every one professes a faith or a want of faith in physic. Surely they must care to know what it is. In truth, it is an anxious question for patients, and also a serious one as respects the estimation in which the profession, as a whole, deserves to be held, whether medicine is walking hand in hand in progress with her sister arts of utility. Has it advanced since the time when those who now claim to teach were pupils? Is what is taught better than the last two collections of similar labors, published a quarter of a century ago, under the titles of the "Library of Practical Medicine," and the "Cyclopædia of Practical Medicine?" It is certainly different, there is no doubt about that; and our first step toward an answer should be the seeing clearly in what the difference consists.

This difference we would endeavor to depict by saying that, both as a science and an art, medicine is now entering upon a *biological* phase.

To explain the meaning of this expression, and to justify the applying it to the branch of human knowledge under consideration, it will be necessary to cast back further than the period with which the comparison was proposed to be instituted. We must in fact begin with the very origin of rational medicine. For it seems to us that from the earliest periods all prevalent theories of therapeutics have been looking at the nature of disease athwart the medium of one common idea, and that this common idea is now for the first time completely changed. Thus a new era, for better or for worse, is being entered upon; and it is the opposite (in this one respect at least), not only of that immediately preceding, but of all that have gone before. Let us not, then, be accused of pedantry if we review shortly from this aspect the early history of the art.

We may pass quickly over the necessary barbarous period, when diseases were looked upon as intelligent evil powers to be propitiated by sacrifices and charms, or overcome by some stronger and kinder spirit. For when once Hippocrates had proclaimed the omnipotent "Reign of Law" in material nature,[1] no physician probably has really believed that its course would be interfered with by any intelligence but that of its Divine Architect. Four centuries before Christ, we find him giving this death-blow to superstition, and endeavoring to lead his pupils to attain a knowledge of nature by a path which he emphatically pronounces "long." But his immediate pupils, who seem to have written the smaller Hippocratic treatises, hoped to cut it short, so far as therapeutics was concerned. They turned into dogmas their master's tentative suggestions. In these speculations we find set forth as (1) *an access of some constituents of the body*, of phlegm in winter, of blood in spring, of yellow bile in summer, of black bile in autumn. "And we may be quite sure," continues the exponent of the dogma, "that whatever diseases excess gives rise to, are to be cured by depletion."[2] They seem, by following this, to have hit on some plans of treatment which are nevertheless good; and they were confirmed in their theory by seeing how much more life they saved than their predecessors.

(2.)[3] Occasional protesters against these doctrines sprang up from time to time; though the fact of their renewed protests seems to show little change in the idea of disease being a noxious substance best treated by removal from the body, during several centuries. The dissenters detected a flaw, but they could not point out where it lay, from lack of sympathy with the mind whose suggestions had originated it. Not so Galen, who, in the second century after Christ, did more for medicine than any ten men since. He fell upon evil times, when the old faiths had rotted away, and the old philosophies were found cold guides, when swinish debauchery was the only real enjoyment, and when those who cared not for that, cared not to live at all. The physicians of his day at Rome were generally panders to vice, slaves ready to adopt an opinion most agreeable to their patrons, believing in nothing because every thing seemed a sham. Yet, in the midst of the society of the doomed empire, Galen buckled himself to his life's work with a full faith that there was a true art of healing latent among the impostures he saw practised around him. So he collected all that had been done already toward understanding the system of Nature, all that botanists, anatomists, and other physicists had contributed since the days of Hippocrates; and that was no little. He investigated also, and observed much for himself. Above all, he tried to enter into the mind of that great teacher, by making his works the text of a commentary, which must have occupied many years. Nor did he neglect to learn from metaphysicians, seeing clearly that the world does not consist in that alone which is cognizable by our bare senses. The conclusion to which he shows himself to have come is that the Hippocratics, in their ideas concerning man's body, erred mainly in not going far enough. For they contented themselves with seeing the ailment in the material different from what existed in health. Now, Galen found Plato and Aristotle taking the metaphysical step, beyond the natural philosophers who had preceded them, of separating force from its object, as if they were two empirical objects different in nature. From their writings he became familiar with the idea of several vital forces coexisting in the body, constituting the life of Nutrition, the life of Animal Motions, the life of Volition. And it would seem to be from Plato (especially by writing a commentary on the Timœus) that he acquired the notion of diseases being additional forces, foreign and inimical to the animal, with a birth, prime, decline, like those of a physiological nature. The whole duty of a physician, according to him, lay in *opposing the action of these morbid forces* (ἐναντίωσις). *Remedies, therefore, were to be sought which, in a healthy man, would produce symptoms contrary to those of the disease.*

---

[1] Νόμος πάντα κρατύνει.—"De Genitura," i. 1. This foreshadow of the Duke of Argyle's title-page is followed by a singular anticipation of Mr. Darwin's hypothesis of the universal procession of germs. The train of reasoning is that of a physiologist, and it is interesting to see him arrive at the same conclusion as the naturalist by a different path.

[2] Περὶ φυσιος ἀνθρώπου, in Kuhn's "Hippocrates," vol. i., p. 361, confirmed by numerous parallel passages to be found in any good index under "Pituita," "Sanguis," etc.

[3] The numbers refer to a collection of these theories in a future page.

There were from time to time people who thought the motto of "Like cures like" to be a better guide to the discovery of medicines. Sennertus thought the matter of so much importance, between two and three centuries ago, that in his old age he devotes several folio pages toward proving that both allopathy and homœopathy were to a certain extent right.[1] His contemporary, Van Helmont, takes the wiser, though less popular, line of argument, that as principles of therapeutics both are fundamentally wrong.[2] Still it can hardly be questioned that, quite up to our own times, the Galenical notion of curing diseases by their contraries has held its ground bravely.

(3.) Its permanence has been in a great measure due to its openness to receive modifications and partial reforms. One of the most important of these is an amplification of Hippocrates's suggestion, that diseases contain in themselves their own cure,[3] into Sydenham's attribution of their phenomena to "*an effort of Nature to get rid of some noxious material.*"[4] This promoted a much milder and better treatment of acute ailments, and fortunately no purist discovered what a heresy it was against Galen.

(4.) Then practical medicine was startled with a flood of light let in by applying to anatomy the newly-studied principles of the mechanics of fluids. Harvey, Malpighi, and Ruysch, in the seventeenth century, explained so much by their observation of the mechanism of the circulation, that it was thought capable of interpreting every thing by a little forcing. And really the persistent way in which, during the next hundred years, spasm and relaxation of vessels are made the causes of all corporeal phenomena, healthy and morbid, by the general run of scientific physicians, raises one's wonder at the ingenuity of the human mind. The last of those who viewed the body as an hydraulic engine, Dr. Parry, actually describes gout as "that determination of blood to the lower extremities which we call gout," as if the only way in which the patient suffered was in having red toes. Yet he is writing in serious earnest.

Contemporaneous with these mechanicians, the chemists under the guidance of De la Boe Sylvius, reënforced by the much stronger Thomas

---

[1] Danaelis Sennerti, "De Chymicorum cum Galenicis et Aristotelicis consensu Liber," cap. xviii., A. D. 1641.

[2] "Ut non per contraria, neque per similia, sed duntaxat per dotata et adpropriata instituantur medelæ et sanationes."—Van Helmont, "Ortus Medicinæ" (ad initium operis.)

[3] Νούσων φύσιες ἰητροί.—Hippocrates, "Epid.," Book 6.

[4] "Dictat Ratio morbum nihil esse aliud quam Naturæ mortificæ exterminationem in ægri salutem omni ope molientis."—Sydenhami, Obs. Med., cap. i.

Willis, persisted in regarding man theoretically as a walking alembic. Diseases were fermentations, and the main object in their management was to get the ferment out of the system, or to render it inert by its chemical union with some remedy. Almost every thing was an acid or alkaline humor, to be best treated by neutralization.

(5.) *Morbid anatomy* was the next valuable contributor to medicine. Bonet led the way by the publication of his "Sepulcretum" at the end of the seventeenth century; but it was not till 1760 that the appearance at Venice of Morgagni's great work, "De causis et sedibus morborum," the accumulated treasure of a long life of shrewd observation, made all Europe think that now at length the true object of therapeutics had been found. Physicians could now see, handle, paint, put in a bottle, put in a microscope, classify, do almost what they pleased with that which gave a name to each disease from having been found in the corpses of the fatal cases. During life they earnestly tried to get rid of this mass of morbid matter. If they failed, they had at all events deserved success. If there was no obvious alteration in the solids of the body, well then, the disease must have existed in the blood, and they resolved at the next opportunity to get as much of that out of the patient as possible. The influence of morbid anatomy on the art of healing was still dominant in 1835, when the "Cyclopædia of Practical Medicine" was edited. As a specimen of what this may lead to, we may cite, from a first-rate article on pulmonary consumption, a suggestion that emetics may be useful in the earlier stages, to uproot the tubercles from the tissue in which they are embedded, and thus to cure the disease. It reads like a caricature.

In this flying sketch of the variations in the theory of cure, no names have been mentioned but those of true, earnest men, broad-minded and many-sided, in whose hands the changes have been real progress, and who have exercised, and still exercise, great influence over thoughtful minds. Whimsical revivals of exploded half-truths have been common enough, but, like the sprouts from an old stump, have wanted the pristine vigor of the tree. Sometimes decaying error has put on a ghastly show of vitality by decking itself with toadstool paradoxes. But the genuine stems of knowledge have gone on blossoming and strengthening irrespectively of undergrowth and shams.

It must be remembered always that throughout there has been open an appeal to experience, which has been continuously growing more prophetic in its decision and justly stronger in its authority. Often has it sternly checked the acts of a false or imperfect theory. For example, according to the dominant theory of therapeutics, when influenza first appeared in Europe, those who were bled ought to have got well; but they died, and so after several epidemics the lancet, in exceeding astonishment, was laid aside. So strong was the temptation, that the special object of many writings seems to be to raise a voice of warning against it during the whole of the past century. In the end, experience prevailed even against such a favorite treatment, and utterly stifled many of minor note.

Let the reader now look over again the record of this continuously-improving theory of therapeutics, and it will be seen that in one feeling as to the nature of disease they are all agreed, namely, that it is a something added to the living animal frame, from which it is the physician's duty to deliver the patient. It is, according to theory 1, an excess of some constituent of the body to be reduced; according to theory 2, a morbid force or forces, victorious over healthy forces, and therefore to be opposed; according to 3, "an effort of nature" to expel a noxious material; and the expulsive efforts are, when insufficient, to be assisted by art; according to 4, a mechanical or chemical state, not existing in a healthy man, which therefore hurts the healthy functions, and must be neutralized;

according to 5, a morbid deposit of the body causing irritation, and therefore to be removed, if possible.

It may appear that these five principles of action differ mainly in words. Such is seen not to be the case when they come to be applied to individual examples, and they, in fact, constitute the several foundations on which rest the different intentions of medical treatment, expressed by the five terms, "Elimination," "Allopathy," "Assisting Nature," "Antidotes," "Counter-irritation." It is true, however, that they have a strong family likeness, and that is the very point of the present argument; they resemble one another, in all equally regarding diseased actions as something added to the existence of the individual — added physically and not metaphorically.

Now, it seems to us that the tendency of the Medicine of to-day is to take an essentially opposite view. To its eyes disease daily more and more presents itself, not as an addition to life, but as something less than life. The life of the individual, as exhibited in the various fully living, or yet healthy, vital processes, is the point for the physician's consideration; and to supply its deficiencies is his chief aim. To this end he studies the phenomena of healthy nature with as much care as those of diseased nature; in fact, Pathology is with him, as it is in the new University Museum at Oxford, a department of Biology.[1]

This is the main reason for saying, a few pages back, that Medicine was entering upon its *biological* phase. There is yet another reason which might, perhaps, be reckoned not less valid. The idea of life is now assuming to the physician, above all natural philosophers, a unity which it never had before. The correlation of light, electricity, magnetism, heat, cohesion, and other mayhap unnamed "Powers of the Lord," now seen in the phenomena of the dead world, has been for some time preparing him to feel the likelihood of a similar correlation in the living. As these universal physical forces are mutually convertible one into the other and each into all, they are coming to be viewed as one actor under different characters. So in respect of the animal body, Dr. Haughton has recently been laboring hard to measure with scientific precision the relative values of muscular exertion, growth, innate warmth, secretion, freely balancing them one against another, in order to compare the amount exhibited of each with the amount of food consumed. He boldly tackles a conundrum, as apparently hopeless as multiplying the poker by the scuttle, and making out what the coals come to. Yet, in an address to a social gathering of medical men at Oxford last year, he was considered perfectly sane when he reckoned the increase of temperature in typhus fever as the equivalent of daily climbing a vertical ladder one mile high, or walking twenty miles fair heel-and-toe. Nor does he hesitate to attribute to the storing up of muscular force, during the non-production of animal heat, the incredulously quick return to activity of a cholera patient, whom one has seen but a few days before much more like a corpse than most that are laid out for burial. And without any fear of exciting a smile, he speaks of the carbonic acid excreted as representing so many tons lifted so far from the ground.[2] It never occurs to him that his audience might retain the more elementary notion of independent vital forces united into one body.

More than this, the Reverend Professor, comparing himself to a gossamer-spider throwing loose threads into the summer air, in the hope of attaching his speculations to some unseen flower of truth, suggests that possibly in the dim future we may be able to connect consciousness, thought, and imagination also with the other created powers of which we have been speaking, and so with matter. He sees no impossibility in being able to reckon how much hard thinking can come out of a definite weight of food, while its latent heat is being converted into another form of force.

---

[1] It is called Zoology at present for local reasons; but when the Professor of Botany is incorporated with the other teachers of Physical Science, the wider term must be used.

[2] "On the Relation of Food to Work." Address delivered before the British Medical Association, in the Divinity School at Oxford, by the Rev. S. Haughton, M. D., Fellow of Trinity College, Dublin, 1868.

Of old the Hylozoist idea of the inseparability of matter and force was very repugnant to the religious public of Greece. Areopagites heard St. Paul patiently till he preached it, as exhibited in the Christian doctrine of the resurrection of the body, and then they listened no longer. They could not conceive what the soul can want with a body after death, and that it should be made part of a creed to hold such a reunion of matter necessary to future life, they viewed as folly or Atheism. Any real connection, however, between such opinions and denial of God is satisfactorily cleared up by Cudworth,[1] in heavily-weighted argument; while those to whom example is more persuasive than precept, may have their scruples set at rest by finding a Faraday humbly preaching Christian doctrine Sunday after Sunday, yet using "quality" and "force" as a synonymous term, and asserting their eternal inseparability from the matter which renders them evident to our senses.[2] Ignorant only of man's ignorance, he simply wondered how anybody with the Bible before them could fail to believe it. The more advanced physical studies are, the less danger is there of their leading to Atheism.

It would really seem as if Bacon's trenchant accusation against Plato, as having impeded for two thousand years the progress of physical science, was really not too severe in the instance of pathology. For when we come look for a definition of disease which will best chime in with nineteenth-century notions, it is as far back as Plato's master that we must go. When Socrates was asked how he would define it, he said "a disarrangement of the body."[3] We confess we like this better than Dr. Reynolds's sum-total of "morbid changes in both function and structure;" for one thing, it is shorter; but of more importance is the omission of the word "morbid," a *petitio principii* unfortunately necessitated by the construction of the modern sentence.

The acknowledgment seems to become daily wider spread that "the man is greater than his maladies; that his general condition is of more importance than his local ailments; that disease is a change in him, rather than in some part of him; and that no treatment can be of real service which sacrifices the greater to the lesser."[4] Hence we find repeated in the volumes before us, so often that it is needless to quote instances, how, in the various ailments discussed by various writers, "no specific remedy will cure, nor must any fixed line of treatment be adopted," but that in each case "improvement in the general health is the first object to be sought." Medicines are recommended page after page "to support the strength of the patient;" and it is added, "this they do in a great measure by promoting digestion" (though the disease spoken of is not of the digestive organs)—"and also by directly increasing the force of the heart's action" (though an acute fever is in question).

But we started with the intention of showing how this system of cure is really new, and not merely a putting into more scientific form the result of observations made by our immediate predecessors. That end we shall best gain by quoting examples of treatment from the last encyclopædic works of standard authority, and comparing that treatment with what we find advised in the volumes now being published. In doing so we seem to be listening to the last swan-song of a deposed idol—

---

[1] "Intellectual System of the Universe," vol. i., cap. 3.

[2] Faraday, "Researches in Chemistry," p. 454.

[3] "Σωκράτης ἐρωτηθεὶς, Τί ἐστι νόσος ; ἔφη, Ταραγμὸς σώματος.—Stobæus, iii., p. 310 (Gainsford's edit.).

[4] Reynolds, "System of Medicine," i., 24.

> "Apollo from his shrine
> Can no more divine,
> With hollow shriek the steep of Delphos leaving"—

while the incoming trumpet gives yet a somewhat uncertain note, strengthening as it nears us.

Take the articles on Marsh Fevers, intermittent and remittent. How do we find those endemics handled by the writers in the "Cyclopædia of Practical Medicine" in 1833? Bleeding is described as "useful and often imperiously demanded in the complicated form of the disease," though in mild cases it is thought "of doubtful value." Purgatives and emetics are freely ordered; and with approbation it is mentioned that tropical practitioners give calomel in twenty-grain doses to "carry off the vitiated secretions; and it is subsequently continued in more moderate doses till the tongue becomes clear, when bark is administered." In the present day, as we learn from the observant traveller, Burton, "happily for us the old African treatment is obsolete. A. B. caught fever—gave him calomel, bled him, blistered him—died on the third day." In India also the antiphlogistic treatment of malarial fevers is no more heard of, and, were it not still practised in poor tardigrade Italy,[1] it would seem like contending with a shadow to condemn it in the "System of Medicine." But the foe is not *quite* down yet, so he gets a final blow. He seems to have left his shadow at least on some books, for the student is warned, when he is watching for the remission during which to give quinine, not to wait for its being "so distinct as we find it *described in books*." What should the practitioner care for "vitiated secretions," "congestions" of this, that, and the other organ, "inflammations of the brain," etc.? What he has to do is to cure the man; he knows that the best chance of arriving at that end is to give quinine, and so he sets to work and does it, without the delays which imperfect theories imposed on his predecessors.

On Dysentery we find in the "Cyclopædia" an article by the famous Dr. Brown, of Sunderland, in which the terrible morbid anatomy of the inflamed intestines is fully set forth, and with this in his thoughts the reader is carried along into the bleeding, leeching, and mercurializing, which appear the natural proceeding to a mind impregnated with the localizing ideas of the period. The result was the loss in Madras of 77 per thousand of those affected, in Bengal of 88 per thousand. Nowadays, when these ferocious onslaughts on the morbid lesions are abstained from, and only ipecacuanha, hot-baths, and such-like remedies administered, the loss falls to 13 and 28 per thousand in the respective presidencies.[2] This follows on the doctors getting the morbid lesions out of their heads, and treating their patients instead of their patients' ailments.

In Cholera no decisive steps toward the solution of the problem "what to do" have been taken. But "what to avoid" is taught with some confidence. Conspicuous on the list stands venesection, which is the first named among remedies in 1833, and is entirely omitted in 1866. While at the same time the brandy and the pepper and the turpentine are dealt out with a much more sparing hand, lest, in slaying the malady, the man may be slain too.

---

[1] In Italy bleeding is considered a universal panacea. Even in civilized Tuscany, if a gentleman has disgraced himself by one of those violent fits of anger in which Southerns indulge, or if he has got a chill, he probably sends for his barber-surgeon (*Salassatore*) to take some blood, and says he feels the better for it. In Campania all domestic animals are bled *de rigueur* on Easter Sunday; and in Sicily we have known a lady's habit on a riding tour rendered unwearable by her horse, off his feed from the heat, having had a vein in the neck opened surreptitiously during the night to give him an appetite. In short, venesection is held good for every thing, and the worse the patient is the more he is thought to want it.

[2] "System of Medicine," i., 121, art. "Dysentery."

In the instance of Scarlatina the idea of a *materies morbi* in the blood being the chief thing to be considered by the physician, caused the evacuation of this morbid blood to be looked upon by our grandfathers as the mainstay of cure. Experience had given the depletory doctrine some rude shocks by 1834, and the writer in the "Cyclopædia" speaks of venesection indeed with hesitation, but he confidently advises local blood-letting, scarification, and active purgatives. In 1866 the whole of these remedies have vanished from the article "Scarlatina" in the "System of Medicine."

Whooping-cough is a good example of the tendency in the last generation to look at the body as a number of parts contrasted with the view of it as a whole taken by our contemporaries. Laennec saw in this disease only the lesion of the parts found abnormal after death, viz., the air-tubes; Copland and Guibert only of those whose action is mainly disturbed during life, the brain and medulla oblongata. Dr. Edward Smith in the work before us denies none of these data, but looks at the whole patient as affected. It is needless to say that this makes a serious difference in the practice of the men named.

As to Erysipelas we find the editor writing that "the class of cases which have been described in such a manner as to justify the use of antiphlogistic treatment do not exist except in the histories of the past and the imagination of the present."[1] Yet that past has the antiquity of only a quarter of a century, as a reference to the article in the "Cyclopædia" will show.

It is needless to cite examples among what are commonly called by the Registrar-General "zymotic diseases;" we will come to acute inflammations and such-like injuries of known parts of the body.

In the Inflammation of the Brain so sadly common in children of unhealthy parents (Tubercular Meningitis), we read in the "System" that "there is no doubt leeches, active purging, blistering, ulcerating, and such-like measures, hasten the approach of death."[2] If the author of this sentence had been attacked by the disease when a baby (say thirty-five years ago), he would very likely have had his jugular vein or his temporal artery opened once, and twice if he lived long enough, have had a rapid succession of blisters all round his head, and the sore places made to ulcerate with biting ointment,[3] besides the milder forms of counter-irritation which he names. What would he have said to that?

The change of treatment in Apoplexy and Cerebral Hæmorrhage seems to have taken place somewhat earlier. Already in 1833 we find Dr. Clutterbuck recommending moderation, "a moderate, though perhaps repeated abstraction of blood." Excess seems to have been sufficiently common for him to think it worth while to record his cautions in various forms. But when Dr. Jackson (who contributes the article to the "System") commenced his professional studies, even "moderate abstraction" was a thing of the past. He says he never saw but one patient bled for the disease, and his memory must go back at least to 1853, to judge by the "Medical Register." Allowing him to have been more than ordinarily lucky in avoiding the sight, still a date is thus fixed for the decline at least, if not the fall, of the ancient method, a date which possesses an historical interest.

Delirium Tremens is a disease of which a very marked feature is the inability to rest the perturbed brain by sleep. This was a tempting opportunity for applying the rule "*contraria contrariis;*" for the allopathist had in his hands an agent whose special feature is the production of sleep, apparently in direct proportion to the quantity of drug administered. Accordingly we find, in the time of the "Cyclopædia" and the "Library of Practical Medicine," that sixty drops of laudanum every two hours was considered mild treatment. They recommend that dose though speaking in favor of moderation, and saying that many practitioners gave very much more. If the patient refused to yield to such persuasion, his head was to be shaved, blistered, etc., according to the old medication of acute mania. To-day we are told, "The old idea, that patients in delirium tremens require to be narcotized into repose, may be said to be abandoned by those best qualified to speak on the subject. In truth, the condition of the brain requires that sort of treatment which shall fortify its functions."[1] An allusion seems to be here intended to a theory once propounded by a M. Leveillé, that the delirium of drunkards consists in an *exaltation* of the vital powers of the brain.[2] Dr. Anstie goes on to say that the typical member of this group of remedies is simple, easily-digested food, and pronounces that the "successful treatment of delirium tremens, in nine cases out of ten, depends on the regular and continuous supply of suitable nutriment." The little alarm which the fierce aspect of the symptoms inspires in the writer of these sentences is shown by the observations which he seems to have habitually made, on men so affected, by means of the sphygmograph. This is a scientific instrument of precision, for measuring certain qualities of the pulse; it requires such accuracy and steadiness on the part of the observer, and a raving drunkard is such an unattractive companion, that one is reminded of the aged naturalist who entered the gorilla's cage to count his back teeth.[3] One who can use a sphygmograph must certainly be a cool observer.

---

[1] "System of Medicine," i., p. 689.

[2] Ibid., ii., 396.

[3] "Cyclopædia of Practical Medicine," art. "Hydrocephalus."

We will now occupy our readers with the non-restraint management of Chronic Insanity. Its introduction even into public asylums, in which good work the city of Palermo claims to have led the van, is of older date than the change of theory we are speaking of. And, moreover, the public is somewhat satiated with sensational articles on lunatics' balls and dramatic evenings. But in the treatment of Acute Mania a striking reform has taken place even within the last few years. The strong recommendation by Dr. Pritchard, in the "Cyclopædia," of bleeding as a rule in all cases, has certainly been followed till quite lately. The reason given is characteristic of the era of morbid anatomy—"Are not the anatomical characters which so constantly present themselves in acute cases, and the adhesions which are so frequent in chronic ones, evident proofs of inflammation? And hence are we not authorized to hope for advantages from the use of antiphlogistic means?"[4] To-day we read in the "System"—"Energetic antiphlogistic treatment is energetic mischief." Have we not a right to infer that this change of treatment is derived from a change of theory, which holds now that in insanity "the nervous element is brought to a lower state of life,"[5] instead of being endowed with new power? We feel the force of this explanation of the change all the more, because from the earliest times there have been observers who have noticed how the energetic antiphlogistics often aggravated the raving; but they scarcely believed their own eyes, and stuck to their rules in print, until the time when the pathological view of the disease has altered.

In Rickets, again, what a sweeping clearance of the old objects of trust!

---

[1] Dr. Anstie on Alcoholism, "Systems of Medicine," ii., 89.
[2] "Mémoires de l'Académie de Médecine," vol. i., "Sur la Folie des Ivrognes."
[3] The anecdote is related of the late Mr. Waterton.
[4] "Cyclopædia," art. "Insanity."
[5] "System," ii. 45.

In the "Cyclopædia" we find leeches to the forehead and neck, moderate and repeated doses of antimony, calomel, and gray powder, recommended as the inauguration of all medication. Oh, ye gray powders of our youth, Sir William Jenner has now bid you be labelled "poison—dangerous—especially in small repeated doses!" Oh, our infant daughter! you will grow up able to look at raspberry-jam without the instinctive shudder which has robbed your parents of an innocent pleasure. Physicians reck little now about getting rid of the morbid matter and local lesions; they think only of renewing that morbid matter into good useful matter, which is itself the best application to the local lesions.

As to Consumption we need only to remark that in neither the "Cyclopædia" nor the "Library" is a single allusion made to its treatment by any oily or fatty remedies, which are well known now to be the main reliance of physicians of all denominations. Their aim was to evacuate the tubercle from the lung, in which they certainly failed; the aim of our contemporaries is to renew it into normal condition, to cure the imperfect life by the direct supply of the substance wanting.

So also in the simpler requirements of the surgical art, the same principle is beginning to prevail. Of late when accident or design had deprived some of the internal machinery in the body of its beautiful covering, when a wound, or a burn, or a needful operation, had bared to the bitter air its shrinking fibres—say of muscle or any other tissue—the surgeon reckoned it his duty to see as much as possible of what had happened, so as to guard the weak part from supposed injury, by a number of very disagreeable looking things which he found there. Nowadays the best advisers tell us that looking at a wound, is to act like children who dig up their garden-seeds to see how they are getting on. In covering up the objects of their care with an adhesive, impervious, elastic substance, and neglecting that dreadful business which is technically termed "dressing," they are arguing biologically. Here is a living part, say they, which lives best when it is covered with skin. We cannot make skin, but we will make something as like it as we can, and so heal the disease by restoring what is lacking to full life. This is restorative medicine in its simplest form. Restored, as far as can be, to their usual habits, the vital processes do not degenerate into those weird aspects which half-life puts on—there is no inflammatory action, as it is technically termed.

In the last illustration we have strayed from the pages set for review, not for want of material there contained, but merely to exhibit the principle in its simplest working. It may be easily seen that a prime moving spur to a great deal of the practice, from which our medical guides are now drawing back, was a certain awful "idol of the market-place" called inflammation. With fiery limbs spread aloft, wielding weapons labelled Tumor, Rubor, Calor, Dolor, Effusion, Suppuration, Fibrinous Exudation, Phlegmon, Fever, etc., it has made all fall down before it; and the more it has been sacrificed to, the fiercer it has seemed. It has been a veritable Kalee. Of late, men of science have been picking at the skin of this hideous object of faith, and have seen reason to pronounce some of its weapons of offence mere wind-bags and tinsel. Though they cannot say but what there is a sort of life in it, yet its destructiveness consists mainly in the pitfalls encountered by those running away from the bogy. Laying aside metaphor, it would seem that inflammation consists in the phenomena of a lower degree of life. The process of nutritive growth in the various tissues of the body is arrested at an incomplete stage. For example, what should have been the intricate meshes of skin, elastic sensitive muscle, or mysterious gland, gets no further than being a thickish liquid, which can assume no comely form, can only multiply itself, and appear in the shape of mucus or pus. This is suppuration. Again, the swelling (*tumor*) of inflamed parts is a loss of one of the vital properties of the small blood-vessels, elasticity. Spur them up to more life, and the swelling vanishes. And so on.

What is now principally feared by the shrewder class is, not so much inflammation, as the panic which it causes. They almost prefer that those who have to deal with it should shut their eyes than open them and act upon their fright. A fashionable physician, who is also a learned physiologist and acute observer, was summoned to a case of rheumatic fever of some days' duration. In the consultation he pointed out that there was extensive inflammation of the heart, to the extreme terror of the family doctor. "Oh dear, dear! what will you think of me? How can I forgive myself for so neglecting my poor friend's case?"—"Pray do not be distressed," was the comforting answer, "it is just as well you did not find out the pericarditis; you might perhaps have treated it."

What astonishes us in the volumes at present under review is, not so much the omission of the long and elaborate articles on "Inflammation," which distinguish the "Cyclopædia," and the "Library of Practical Medicine," as the absence of any arguments founded on the idea of inflammation in the course of the separate essays.

There are some who attribute this change of practice to mere whim or fashion, revolving in a circle. Surely this must be a very superficial view, to suppose that, in a grave matter of life and death, the most thoughtful portion of a profession, certainly not frivolous, should be so influenced. Besides, we have shown that the progress of medical theory has not been in a circle, but always straight on, however slow. Another explanation (which goes a little deeper, inasmuch as it has a spark of genuine truth in it, but still does not satisfy us) suggests that the influence of both methods of practice has been inappreciable. A candidate, who was being examined for a diploma not long ago, put this very well in answer to a question, how it was that "fever-patients used once to be bled to excess, and nowadays supplied with beef and brandy, without so much difference as we might expect being found in the bills of mortality?"—"It seems to me," he replied, "that our patients are much tougher than we take them for." It is quite true, as Zoological Societies know to their cost, that domestic animals are hardier than wild, savage man is hardier than domestic animals, and civilized hardier than savage man, in resistance to disease or drugs. The answer which the examiner intended to elicit was a different one; he expected to hear something about what is called "the change of type in disease." It has been suggested that diseases, especially fevers, are not what they were; and that though we are probably right in the way we deal with them, yet our fathers might have been right too in adopting an opposite line of conduct. What is meant by this? Now, we can hardly suppose any one to mean that an affection, maintaining the same external characters which enable us to classify it, should yet become of an essentially different nature. What is intended, doubtless, is that *man* has changed, that the Briton is more puny and faint-hearted than of yore, and that an increasingly vitiated progeny is yearly brought into the world, which is less and less able to bear either the disease or the remedy. All trustworthy records give the lie to this old Horatian cynicism. Measurements of ancient armor and clothes show that we are bigger, measurements of athletic feats show that we are stronger, the profits of insurance offices show that we are longer lived, the diminished ravages of epidemics show that we resist disease better than our ancestors. The pages of Froissart do not give more instances of bravery than "our own correspondent" from the Crimea or India, and Loan portrait galleries certainly do not raise our envy for the good looks of those who have gone before us. But the most complete answer to the "change of type" theorists is afforded by the facts elicited by statisticians, that in reality our forefathers did *not* have their lives prolonged by the antiphlogistic discipline. They stood it, just as we should stand it, by force of the principle so pithily given in the candidate's answer; and because some of the evil was counteracted by the rest of the treatment; but such good recoveries as we make now, they did not make. This is especially shown in the records of pneumonia, and acute rheumatism, and typhus fever.

We believe the change of type to be in the doctor, not in the diseases, or the patients: and we believe the change to consist in his truer insight into the nature of that living body with which he has to deal. And this truer insight we would attribute to the general diffusion of studies which at first glance may seem to have no bearing on the matter in hand. Many a medical student, burning to apply his talents to the relief of his countrymen, frets over the months devoted to teaching him about levers and pumps, light, heat, and electricity. He is disposed to limit the usefulness of chemistry to a knowledge of the composition of drugs, and the analysis of secretions; all physiology, which is not distinctly human, he thinks lecturer's padding. If he is shrewd, he soon finds his mistake, and thanks the educational authorities, which kept his opening mind at the whetstone. He finds that a knowledge of the universal powers makes intelligible to him much that is a muddled enigma to one who has rushed in at once to the study of man, and man alone. It is easy to him, for he studied the phenomena leisurely in their simplest form, instead of a form intricately opaque in the clouds of combination, scudding past on the whirlwind of opportunity. It is the knowledge of these sciences, often superficially condemned as merely ornamental to a working doctor, that has advanced of late years more than all other human learning; and we cannot but attribute to that advance the unconscious progress of the theory of therapeutics we are here pointing out.

Every one has heard of the retired physician who said that in his youth he had twenty remedies for each disease, but in his old age he had twenty diseases for each remedy. The experience which time brought to the individual, a longer time is bringing to the profession; the list of diseases has increased, as witness the new Nomenclature issued by the College of Physicians; but there has developed at the same time the classification by which these are more and more referred to a few morbid phenomena, controlled by a much more restricted pharmacopœia than of old. Polypharmacy is decidedly out of fashion, and we should attribute this to the determination of physicians to know something definite about drugs before using them.

We trust we shall not be thought scornful for having passed over, in our cursory sketch, a few pages back, several peculiar principles for the selection of remedies which have parenthetically appeared in the history of medicine; principles inconsistent with those we have noticed. Two, however, have left their mark, the Doctrine of Signatures and Homœopathy. It was a sweet and attractive idea to suggest that God had impressed a signature upon objects in nature capable of being used for cure, and that this signature consisted in a resemblance either to the disease to be healed or to the part where it was situated. The idea can never be forgot as long as the English tongue is spoken: under its guidance the sparkling Eyebright was gathered by the mediæval oculist; Liverwort and Lungwort were used to heal the organs they were considered to resemble; jaundiced persons were immersed in baths of the yellow wild cucumber; hæmorrhages were arrested after the application of the red-speckled Bloodstone or Hæmatite; wine-colored gems were worn, and called Amethysts, because they performed the easy task of letting the wearer know when he had drunk too much (probably by an apparent haziness of outline or color); the tuberculated roots of Scrophularia and Pile-wort were eaten for the swellings they were compared to and named after; roses and cochineal were introduced into the pharmacopœia originally because they were red, as cures for scarlet-fever; elder-pith was thought to do good for the spinal marrow, poppy-heads for human heads; and so on. There is such a poetry in this doctrine that one regrets to say nearly all the medicines it recommended have proved inert; the *Lapilli cancrorum* for gouty concretions, and Carrageen-moss as a demulcent for lung-complaints, are probably the only specimens which a physician could make available.

Homœopathy has already been alluded to as having been discussed of old. Its system is to search for remedies among drugs which in a healthy man produce symptoms superficially like those observed in the disease. There is some promise in the idea, for such reagents would of course be acting in the same part of the body as the morbid processes are acting, and so would seem likely to be useful at some stage of the illness. The employment of alcohol for burns and of expectorants for coughs are familiar instances. Of late this principle has scarcely, if at all, contributed to practical medicine; partly because its adherents have formed themselves into an exclusive sect, and have adopted a peculiar phraseology and peculiar habits of administering remedies; partly because Hahnemann, the most talented teacher in this sect, incorporated with homœopathy the paradoxical suggestion that drugs are powerful for good in an inverse ratio to their dose. This has entirely put a stop to experiment: for, were it true, all the inferences we have been drawing all our lives from personal experience and physical science must be false. It would seem, from periodicals circulated among their adherents, that a better era is now dawning, that some of the leading physicians practising homœopathy are anxious to repudiate the infinitesimal dogma, and to cease calling pills "globules" or writing in cipher. They also take kindly to the restorative treatment. If, however, allopathy should be, as we think, dying away, where will place be found for homœopathy? Her mission hitherto has been that of an opposition; will she accept the politics of the incoming party, or will she devote herself anew to find flaws in that also?

We also do not wish to make light of such a protester as Van Helmont, who was quoted (p. 397) as professing a conviction that drugs were not useful in virtue of their effects being contrary to or similar to the disease, but by being "endowments and appropriations" to the body. This is the gist of the whole matter—notwithstanding the author has had less than his due influence, partly from the strange wording of his speculations, and partly from his having been somewhat cracked and confessing to visions of archangels, etc.[1] And so he has played the part of Solomon Caüs, while we can occupy the place of Newcomen or Watt. God grant us strength to do it as boldly as they, and with a sense of responsibility proportioned to the superiority of a human life to a steam-engine! But here is really the gist of the whole matter; the essential feature in a successful medicine is that it "*endows*" the imperfect body with a renewed function, or "*appropriates*" to its use some substance in which it is deficient.

This view as to the relation of disease and remedy is again growing rapidly, and is year by year more generally adopted by the profession. If printed proof of this be required, it is afforded by a list of the new drugs which have been first brought into general use since the era with which we have been comparing the present. Cod-liver oil, phosphate of lime, ox-gall, pepsine, pancreatine, are familiar instances of novel methods whose intention is to supply a corporeal want; while the advertising sheets of periodicals, and the displays on druggists' counters, show what sort of new preparations it is worth while to invent for the convenience of physicians and patients. Nearly all are of a *constructive* nature. Many of these are devised with narrow views, and prove fallacious accordingly (we may instance the inhalation of oxygen); but their very introduction shows the tendency. Many we do not know how to use yet, and must await bedside experience. Nevertheless, there they are: and the synthetical or creative direction lately taken by chemistry promises a rapid increase in their number.

---

[1] C. Van der Hoeven, "Historiæ Medicinæ Compendium," p. 172.

It may be observed, also, that when a change is made in the explanation given of the action of an old-established treatment of acknowledged merit, that changed explanation always points to material added instead of material taken away. For instance, the beneficial results of vaccination used to be interpreted thus: it was supposed that the vaccine causes a fermentation in the body by which there is effected the destruction of some substance previously capable of accepting the small-pox poison; which, therefore, passes harmlessly through the person. Nowadays the pupil is told that the protecting virus unites with the supposed dangerous substance, and by its presence preoccupies the place which might otherwise have been open to the small-pox. It is suggested that thus it is easier to understand the cessation of the protection after a period of years, and that it is more in accordance with the analogy of nature for a base to be set free by the wearing away in time of its acid, than for a destroyed substance once gone to be created anew.

In all matters medical the high court of appeal is clinical experience. Arguing from this, some have suggested that theory is superfluous altogether, and that all to be done is to use what has previously been found to be useful. This would make all progress to consist wholly in accident. Before the almost infinite combinations of bodily derangement which are daily presenting themselves newly to the sight of the observant practitioner, he would feel utterly powerless, or else he must shut his eyes to any but the very simplest types of disease. This were folly in anybody, but in a consultant it is dishonest, for he is called in for the express reason that the case is one difficult from its novelty or rarity. As a matter of fact, however, few of these objectors ever do prescribe for a sick person without theorizing, and, when they have to put their reasons into words, very wild and absurd they will sometimes be found. The only originator of action can be theory, and the choice lies between one that is taken up hap-hazard and one that is adopted on rational grounds.

But the high court of appeal is experience. Yes, the poet of the Greek race-course was quite right: "'Tis the trial proves the man." Clinical researches and empirical decisions must always hold the most honorable post of any department of medicine. Never probably was there a time when they were so highly appreciated as now; so that, with much confidence we can leave to be estimated by this measure the restorative system of therapeutics which we have augured to be so rapidly prevailing among our teachers of medicine.

The almost universal adoption, by all hospitals, of a system of registration and case-taking renders the dicta of experience of late years not only much more accurate, but much more rapid than in former times; it also guards against the fallacy of statistics collected for the special purpose of proving a particular point. A few hundred instances, carefully observed and tabulated, will produce an impression more distinct than many thousands loosely remembered and scattered through a generation, while unconscious documentary evidence is the strongest that can be had. An attempt also is being made by the British Medical Association to render available the cases occurring in private practice, by issuing printed schedules to be filled up in a uniform manner. The idea is a grand one, and, whether successful or not, the Association merits the blessing of all time for trying thus to utilize the waste of daily experience.

We must not despise the results of judiciously appropriated accident, leading to the discovery of the use of remedies. Melampus, the soothsayer, physician to one of the obscurer kings of Thrace, observed, during one of his country rambles, that goats which had grown morbidly frisky were calmed after having instinctively or accidentally browsed on a plant, since called Melampodium. So, on his patron's daughters falling into a somewhat similar state, he administered it, and effected a cure. A metropolitan hospital physician, a short time ago, ordered a baby under two years old, in a peculiar morbid state, what he considered the large dose of four drachms of rum. By mistake the prescription was read four ounces; and so the infant, instead of a tablespoonful, had three glasses a day of this powerful spirit. It throve wonderfully; but it was not till the end of the week that the prescriber discovered what a fortunate error had been committed. Now, in either of these cases, would the accident have given instruction, had it not chimed in with a rational theory in the mind of the observer? Deductions from accident offer an instance of the striking combination of experience and theory.

It is no reproach to the goodness of the road, that there are quicksands, into which those who follow the guidance of restorative medicine may easily fall, if they are careless walkers. Those from which at present we foresee most danger are "efforts of Nature," "*la médecine expectante*," and alcohol. The attribution of disease to efforts of Nature has already been alluded to as a valuable reform upon absolute Galenism. Sydenham assumed that these efforts are necessarily good, and that the principal duty of the physician is to aid them in expelling morbific material, or at all events not to hinder them doing so. Good for the type, good for the race, good for the kind, good for the kin, perhaps reverence for what Nature really means, will induce us to acknowledge those efforts to be. We will allow that to the case of man, the lessons of "scarped cliff, and quarried stone" do not apply, for supernatural means have been taken to inform us that our type is already moulded on the highest model, and worthy of the highest care. But to the individual Nature is merciless. And it is with the individual that the physician has to do. Will the mother resign to the grave her cross-grained, deformed first-born, because it would be better for the race, nay better for her own immediate kin, that the family should be continued by his younger brother? Many a cumberer of the ground, when laid on a sick-bed, feels that, so far from his being missed, his place will be more worthily filled up, after sundry efforts of Nature for the good of mankind have been successful; yet he elects to stay. Many a patient knows that science would be immensely enlightened by a sight of his remains—but he had rather not. Before we assist efforts of Nature, we must have evidence that their end is not our extinction, not a capital punishment for neglecting to use our reason.

La médecine expectante is simply a disbelief in the utility of all interference. A young man hears his elders point out the harm done by some previously popular treatment, but he fails to understand what is substituted for it. So, knowing that a certain percentage of his patients will recover if he does nothing, he takes that course. Let him reflect that possibly the very case before him may be the one which makes the difference in the percentage, which, naturally fatal, may be healed by art, and we think he will be roused to action. Let him also observe that the evidence of history shows a progressive improvement in medicine; the denounced treatment was probably better than what was popular before it, and that better than leaving the patient to hurt himself by fallacious struggles for health. It is better, therefore, to do something of which he knows the imperfection than to do nothing at all. Asclepiades very properly called all medical science, which does not end in action, "a meditation upon death."[1]

Alcohol is perhaps the greater danger of the three, inasmuch as its use involves questions of quantity and degree, the solution of which is always painful to superficial minds. Because, in small amounts and in selected cases, it is followed by an increase in the vital functions, there is a tendency to hope from these effects a pure gain of vital force, and to lean on it alone. Experience does not justify that hope; it shows that, while, up to the limit of aiding perverted digestion, alcohol is a decided restorative and promoter of life, beyond that limit it actually arrests life in a degree proportioned to the dose.[2] The limit differs in every disease; so that, in this powerful agent, instead of having an easily-managed tool, we are wielding a weapon requiring great skill and foresight.

Forewarned and forearmed against these perils, and kept straight by a constant appeal to experience, we feel sure that what we have made bold to call "restorative medicine" cannot but prolong human life, and lighten its burdens. We have shown it to be unconsciously adopted by the rising teachers of the present and future, and may confidently expect that at no distant time it will be put more distinctly into form as the true art of healing.

Before we conclude, we would take leave to say a few words as to the duty of the public, in performing their part in promoting the progress of which we have been trying to trace the footprints. Their principal duty bears, like all those which political economists class as virtues, a selfish character; it really may be summed up in an endeavor to set a higher value upon their lives than on their property. The proof of their doing this will be their taking steps to secure, to that profession which guards those lives, opportunities for the highest and most protracted education, and means for carrying out its investigations into nature.

This consummation is certainly far from being yet attained. A tale is told of a Scotch farmer, who protested loudly against the apparently modest sum of half a crown a visit for attendance on his wife—"Eh—it's just ruinous! Half a croon! And I can ha' a coo-doctor for three an' saxpence!" Inasmuch as the human body is neither eatable nor salable, he reckoned it as of inferior worth to the bovine. A not dissimilar spirit is shown in the unhesitating vote by Parliament of 3,000*l.* for the cattle-plague inquiry, while not a penny was allowed for an investigation into the spread of leprosy in our colonies, while every item of expenditure for increasing the efficiency of the medical profession is haggled over, and every attempt to enforce a higher education looked at with coldness and suspicion, for fear the enhanced goodness of the article should entail a corresponding rise in its price. Surely this is a suicidal proceeding. Let each educated person examine for himself the kinds of knowledge needful for this profession of medicine, and he will not fail to be convinced that not shrewdness, or knack, or habit learned from tradition, can be the chief virtues of its students. There is scope in it for the highest and broadest intellects, and he is most suited to be your physician who is most worthy of the name of man. It is your business to give him every encouragement to make himself so by a leisurely and complete, and therefore expensive, education.—*London Quarterly Review.*

---

[1] *θανάτου μελέτη.*

[2] See Chambers's "Clinical Lectures," Lecture L., "On Alcohol," for reference to experiments on which this statement is founded.

Reports on the Progress of Medicine.

PHYSIOLOGY.

1.—*Poison of Snakes.* [Quarterly Journal of Science, April, 1869.]

M. Vulpian, of Paris, received some dry and some moist poison of the cobra di capello, which had been forwarded from India by Mr. Shortt. He proceeded to try its effects upon frogs, rats, and rabbits, and had especially in view the object of testing the truth of Dr. Halford's observations as to the extraordinary increase of white corpuscles in the blood of bitten animals. In the condition in which he was able to study it—a condition in which its activity is, without doubt, notably diminished—M. Vulpian found that the poison appeared to act on the central nervous system, the functions of which it little by little suppressed, producing a state of somnolence of a remarkable kind. In frogs it produces an effect similar to that induced by curare; it abolishes the action of motor nerves on the muscles as regards contractility. The movements of the true heart persist some time after death, while those of the lymphatic heart cease very soon, as in frogs poisoned by curare. It is hardly necessary to say that the results of the action of the poison of the cobra di capello, relatively to the muscles and to the nerves, has nothing peculiar about it; for we know now more than twenty toxic substances which destroy the function of the motor nerves as regards muscular contractility. As to the blood, M. Vulpian has *not* confirmed the existence of the modification described by Halford, and has seen nothing at all like it. He finds (and this is a peculiarly interesting fact) that the buccal mucous membrane is capable of absorbing the poison, and that the same symptoms are produced as when the poison is absorbed from a wound. Those who have had the opportunity have lately been busy in examining snake-poison.

A writer in the *Lancet* details some experiments, in which he failed to produce the effect on the blood described by Halford and by Jones. It appears to us quite possible that the intensity of the poison might affect this condition very much, and that while being sufficiently powerful to kill, M. Vulpian's specimens of poison may have failed to produce the exaggerated leucæmic condition simply from the loss of intensity or of a special quality acting on the blood itself or on the hæmopoietic glands. Some remarkable cases of cure from snake-bite are reported in the medical journals, as effected by Dr. Halford in Australia, by the injection of ammonia subcutaneously and into the veins. Ammonia has long been used as a stimulant in these cases, and the injection seems to be merely a more direct method of application, the object being to counteract the drowsiness which comes on. Colonel Showers records some striking instances of cure from snake-bite effected by a native Hindoo with certain herbs. If M. Vulpian is right in regarding the mode of action of snake-poison as similar to that of curare, it seems not improbable that vegetable principles should exist having an opposite physiological effect, and therefore capable of neutralizing it.

2.—*The Action of Anæsthetics on the Blood-Corpuscles.* By J. H. McQuillen, M. D. [Dental Cosmos, March, 1869.]

In the October number of the *Dental Cosmos* a report was presented of a series of experiments performed by me, on a number of animals, with the view of ascertaining whether the assertion made by a distinguished experimentalist and scientist of England, that nitrous oxide, even under the most delicate manipulation, would prove destructive to life, could be possible. These experiments, which clearly demonstrated the assertion to be unfounded, were not performed in private, but in the presence of a number of gentlemen whose experience in the use of anæsthetics and whose scientific knowledge made them competent judges. First performed before the members of the Odontographic Society of Pennsylvania, they were repeated, after an interval of three weeks, on the same animals, in the presence of the members of the Biological and Microscopical Department of the Academy of Natural Sciences.

A month subsequent to the last-named occasion, one of *these animals*, a rabbit, in the presence of a number of gentlemen, was placed under the influence of nitrous oxide, and kept in a profound state of narcosis for *one hour and five minutes*, by alternating atmospheric air and nitrous oxide, removing the inhaler ever and anon for that purpose. Without question the animal could have been kept in the same condition double or treble the time without injury to it, for in a few minutes after removing the anæsthetic entirely, the animal was restored to consciousness, and leaped from the table to the floor, and for a number of weeks after this ran about my premises in a healthy and lively condition, and no doubt would have been still alive had I not demonstrated on him before the students of the Philadelphia Dental College the absorption of fats by the lacteals of the villi of the intestines, below the duct of the pancreas, and also the action of the heart and lungs; necessitating as this did opening into the abdomen and thorax, life of course became extinct.

When under the prolonged influence of nitrous oxide referred to, one of the blood-vessels of this animal was opened for the purpose of examining the blood-corpuscles under the microscope, and ascertaining whether they had become disintegrated or any change had taken place in their form. On examination no perceptible difference was observable even after this lengthened exposure to the anæsthetic, when compared with the blood of another rabbit, which was not under its influence. This result induced me to examine into the statements made by Dr. Sansom, relative to the action of anæsthetics on the blood-corpuscles, in his highly interesting and able work on chloroform.[1]

Prior to giving a description of my experiments in this direction, it may be proper to briefly refer to the prevalent theories on the physiological action of anæsthetics; also to the experiments performed and conclusions arrived at by Dr. Sansom. The view generally entertained is that first suggested by Flourens, that these agents act directly upon the nerve-centres, producing regular and progressive modifications in the functions of the brain and spinal axis, first affecting the cerebral hemisphere, then the power of coördination in the cerebellum, then the conduction of sensation and motion in the spinal cord; and lastly, if the agent is pushed so far as to decidedly impress the medulla oblongata, suspension of respiration and circulation.

Dr. John Snow, regarding this theory as an erroneous one, and recognizing ether, chloroform, and other anæsthetics as non-supporters of combustion, advanced the theory that these agents, interfering with the introduction of oxygen into the system, induced their effect by the suspension of oxygenation, he therefore asserted that "narcotism is suspended oxygenation." This view is embraced and strongly advocated by Dr. B. Ward Richardson (the friend, biographer, and editor of his work on "Chloroform and other Anæsthetics"), and in England, apparently, is being very generally adopted by writers on this subject; Dr. Kidd, who has devoted much attention to the study of the action of chloroform, is, however, a prominent exception.

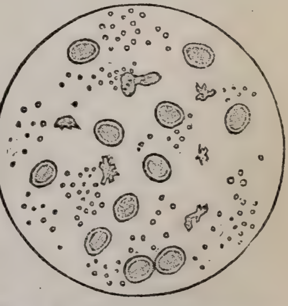
---

[1] Chloroform, its Actions and Administrations. By Arthur Ernest Sansom, M. B., London. Lindsay & Blakiston, Philadelphia.

Dr. Sansom, accepting this theory, and knowing that nitrous oxide is not only an anæsthetic but a supporter of combustion, recognized the necessity of presenting something more conclusive, in support of the view, than had heretofore been offered. He therefore, in a paper read before the Royal Medical and Chirurgical Society, in 1861, as the result of certain experiments performed on the blood-corpuscles of man and animals out of the body, attributed the influence exerted by anæsthetics on the nervous system to their acting directly upon the blood-corpuscles, by modifying their form and integrity, and indirectly upon the nervous system through this altered condition of the blood, by interfering with its oxygenation. In his work he describes a series of six experiments; placing on glass slides, under a quarter-inch object-glass, human and frog's blood, and subjecting them to the *direct contact* of alcohol, ether, and chloroform, which resulted quickly in the disintegration of the blood-corpuscles, leaving nothing but their nuclei and *débris* of the walls of the corpuscles. From these experiments on blood *out of the body*, he states in the work referred to: "The effect therefore of these agents upon the blood is solution—destruction. At first there is a change induced in the cell itself and upon the nucleus (in the case of frog's blood). The globuline of the blood is acted upon as it were by a caustic. Finally the old corpuscle is destroyed and its coloring matter set free." . . . . From the foregoing facts and other considerations, the author considers that certain conclusions in regard to the action of anæsthetics are warrantable. Anæsthetics are agents which when absorbed into the circulation exert an influence upon the blood. They are shown to have the power of altering its *physical character and physical properties.* By an action upon its constituent (proteinous) elements, they tend to alter and by a profounder action to destroy its organic molecules. Its physical perfection being interfered with, its function is held in abeyance; the changes which contribute to constitute perfect life are retarded. Narcosis ensues; and is due, not to the influence of a circulating poison, but to the influence of an altered blood. Further on he adds: "Narcotism (or to speak more particularly, chloroform narcotism) is due not to a special poison that 'mounts up to the brain,' but to an altered blood. Then 'narcotism is a suspended oxygenation.' Whatever produces to a certain extent insufficient aëration of the blood, produces narcosis; and whatever produces narcosis produces by some means or other imperfect aëration of the blood."

In drawing these conclusions, of an altered condition of the blood, from appearances presented by the blood *out of the body*, Dr. Sansom evidently leaves it to be inferred that somewhat if not exactly analogous results are produced on the corpuscles *in the body*, when human beings or animals are under the influence of anæsthetics by inhalation. After a patient, oft-repeated series of experiments performed by me during the past three months, not only on blood out of the body, but also in cases in which human beings and animals have been placed under the influence of ether, chloroform, and nitrous oxide, and the blood drawn from them *prior* to and *after* the administration of these agents has been carefully *examined*

FIG. 1.



Frog's blood placed upon the slide, and chloroform brought in direct contact with it.

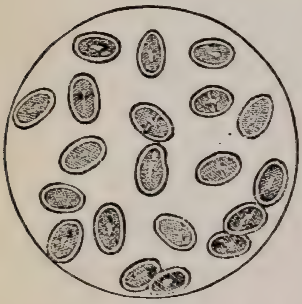
and *compared*, the results obtained compel me to take very decided exceptions to such conclusions being justifiable in the premises.

First Series.—The experiments were as follows: In my examinations of the blood of man and animals, when ether and chloroform were brought in direct contact with it out of the body, under a fifth objective, the discharge of the nuclei and the disintegration of the corpuscles have invariably occurred, and in the frog leaving a result similar to that which is presented in the accompanying drawing (Fig. 1), from one of my specimens, wherein it will be observed that the field is occupied by the nuclei, *débris* of disintegrated globuline and corpuscles, in which the change of form, size, and other characteristics are most striking.

Second Series.—On placing, however, two glass slides containing frog's blood over watch-crystals, one holding chloroform and the other ether, and covering them with glass finger-bowls for half an hour, thus exposing one to an atmosphere of ether, and the other of chloroform, I found, on removing the bowls, and permitting the bloody sides of the slides to remain downward, until all the ether and chloroform had evaporated, that no disintegration or marked change in the form of the corpuscles was observable under the microscope, on comparing them with the blood of a frog unaffected by an anæsthetic. This forcibly demonstrates the difference between exposure to *direct contact* and the *vapor* of chloroform, even out of the body.

Third Series.—Over and again in the presence of a number of gentlemen, I have placed frogs under the influence of ether, chloroform, and nitrous oxide, and examined their blood-corpuscles immediately after without finding any disintegration or change in the form of the corpuscle. In one instance, a frog was so completely narcotized by chloroform that it died; the thorax of the animal was opened, and the lungs cut out, and the blood obtained directly from that organ, and even here, where, if the inference of an altered blood was correct, there should have been discharge of nuclei, disintegration, or *marked* change in the form of the corpuscle, nothing of the kind was evident, as will be seen by the accompanying illustration, drawn from the slide on which the blood was placed (Fig. 2). As already intimated, the experiments in this direction have been prosecuted on every available occasion within the past few months; and I have not confined myself to frogs, but, in the course of vivisections on a large number of animals (rabbits, dogs, cats, and pigeons), to illustrate my course of lectures on physiology this winter, when these animals have been placed under the influence of ether or chloroform, their blood has been examined, and no change in the form of the corpuscles has been evident.

FIG. 2.

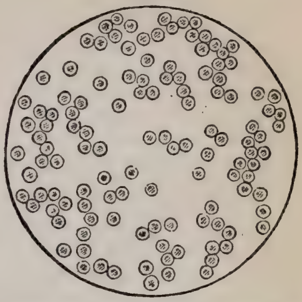


Corpuscles from the lungs of a frog which died under the influence of chloroform.

Fourth Series.—The examination of the blood of a number of human beings drawn prior to and after having been under the influence of ether, chloroform, or nitrous oxide, for the extraction of teeth, has yielded similar results, as will be evident from the accompanying illustration of the blood, obtained from a patient (Fig. 3) while under the influence of chloroform. Any one accustomed to microscopical examinations will recognize the normal characters of the corpuscles, so far as it is possible to present them in a woodcut.

The results of these investigations were recently presented to the members of the Microscopical and Biological Department of the Academy of Natural Sciences, illustrated by a large number of microscopical slides, and, although some time has elapsed since the blood was placed on many of them, the corpuscles retain their form unchanged.

FIG. 3.



Corpuscles of a patient under the influence of chloroform.

Presenting the statements for what they are worth, and desiring that others may either confirm or disprove them by experiments of their own, as carefully conducted and as frequently repeated, and not merely performing a few experiments and then drawing conclusions which they would not be warranted in doing, I would suggest to such that there are two modes of preparing blood for microscopical examination, each of which has been tried in my investigations. First plan—the blood, placed on a slide, is spread with a knife-blade thinly over the glass, then waving it backward and forward in the air, the blood is dried by evaporation, and can be covered with a thin glass slide, cemented, and kept for a considerable length of time without change. Second plan—a drop of blood is placed on the slide, a thin glass cover is brought in contact with the edge of the drop, and, by capillary attraction, a stratum of blood is drawn under it. Although this answers for immediate examination, unless some menstruum is employed for the preservation of the blood, its characteristics become so completely changed in the process of coagulation that the specimens become useless. In pursuing these investigations, care must be exercised to prevent the *direct contact* of ether and chloroform with the blood-corpuscles, as this makes the greatest possible difference.

In conclusion, although it is not my intention in this communication to engage in an extended inquiry relative to how anæsthetics produce their effects, it seems to me that the above experiments demonstrate that we are not warranted in denying that these agents act directly upon the nerve centres. All the phenomena, indeed, attendant upon their administration, the gradual exaltation of the cerebral functions, followed by the progressive impairment and temporary suspension of the special senses, the loss of coördination on the part of the cerebellum, and, when the agent is pushed too far, the arrest of respiration and circulation through the decided impression made upon the medulla oblongata, seem to favor this hypothesis, in contradistinction to the theory that anæsthesia is due to suspension of oxygenation.

In connection with this, I cannot refrain from saying, when taking into consideration the readiness with which fluids absorb gases, that undue prominence apparently has been given by physiologists to the blood-corpuscles as *the* carriers of oxygen to the tissues, and carbonic-acid gas to the lungs, for it is reasonable *to infer that the liquor sanguinis is actively engaged in this operation.* After the most careful examination under the microscope, I have been unable to observe those modifications in the form of the corpuscles in venous and arterial blood, changing from biconvex to biconcave disks, and attributed to the absorption of the gases, of which so much is said in the books. That anæsthetics, when acting directly upon the nerve-centres, may interfere with the oxygenation of the nervous mass, is possible, but it is to be viewed rather as an *effect* than as a *cause* of narcosis. Again, even admitting that such agents as chloroform and ether, by interfering with natural respiration and the oxygenation of the nervous mass, might possibly produce their result in that way, it is difficult to understand how this can be brought to bear upon an agent like nitrous oxide, which contains an excess of oxygen over atmospheric air. To those who may assert that nitrous oxide is a compound (and not a mixture like atmospheric air), and therefore incapable of decomposition and furnishing oxygen to the nervous mass, I would remind them of a law in chemistry, that when two compounds, the elements of which have a stronger affinity for each other than the compounds in which they exist, are brought in contact under favorable circumstances, a mutual decomposition occurs, and new compounds are formed in their place. It may be said that the conditions in the body are not favorable to such results; but who shall have the temerity to assert that, when recalling the incessant compositions and decompositions of a chemical character taking place in the body, fully recognized and admitted by those who insist most upon the controlling influence of vitality? It is a well-known fact, that nitrous oxide is a supporter of combustion, and that a lighted candle burns with increased brilliancy in it; here the combination of the nitrogen and oxygen in definite proportion is not so strong but that the carbon of the candle is able to seize upon the oxygen, and augment the size of the flame. The function of respiration consists in a mere interchange of gases, of the exhalation of carbonic-acid gas and the introduction of oxygen; the latter, absorbed by the blood, is carried to the nervous mass and other tissues, and results in their oxygenation, a slow form of combustion, which is but a difference in degree with the burning of the candle. If, then, the nitrous oxide, as can be readily demonstrated, yields up its oxygen to support the burning of a candle, where is the philosophy in denying that it may also as freely give up its oxygen to a tissue which has such a strong affinity for it as the nervous mass, when they are brought in direct contact with each other?

In addition to these arguments, it should be remembered by the readers of this magazine, that in cases of impending asphyxia from drowning, hanging, inhalation of noxious vapors, etc., on a part of a number of animals experimented upon by my friend and co-laborer, Dr. Geo. J. Zeigler, animation was promptly restored in every case by the injection of nitrous-oxide water into the intestines of the animals. In these cases the efficacy of this agent in supplying oxygen to the blood and the nervous mass was most satisfactorily demonstrated.

If we assume that the influence of anæsthetics is dependent not upon a direct action on the nerve-centres, but on an altered condition of the blood and the suspension of oxygenation, we must apply the same principle to all diffusible stimulants.

3.—*Influence of Section of the Pneumogastric Nerve on Respiration.* [Quarterly Journal of Science, April, 1869.]

Herr Voit, of Munich (a physiologist, whose writings on the subject of the connection between muscle-oxidation, food, and muscular work, as opposed to Liebig's old teaching, were of much value, and of early date in the late revulsion of scientific opinion on that subject), has experimented on the effect of cutting the pneumogastrics as to respiration. Previous experimenters have shown that the amount of carbonic acid exhaled after section of the nerve is the same as that before. The author and Dr. Raber find now that this is true only for the first few hours after the operation. At a later period, when the tissue of the lung has begun to undergo a change, the quantity of carbonic acid diminishes rapidly, and that of oxygen is increased.

4.—*Temperature of the Body in Health.* [Popular Science Review, April, 1869.]

Dr. Sydney Ringer gives an abstract of a paper lately laid before the Royal Society on this subject. He gives the results of the experiments made by himself and the late A. P. Stewart. The following are the conclusions: The average maximum temperature of the day, in persons under twenty-five years of age, is 99°.1 Fahr.; of those over forty, 98°.8 Fahr. There occurs a diurnal variation of the temperature, the highest point of which is maintained between the hours of 9 A. M. and 6 P. M. At about the last-named hour, the temperature slowly and continuously falls, till, between 11 P. M. and 1 A. M., the maximum depression is reached. At about 3 A. M. it again rises, and reaches very nearly its highest point by 9 A. M. The diurnal variation in persons under twenty-five amounts, on an average, to 2°.2 Fahr.; but in persons between forty and fifty it is very small, the average being not greater than 0°.87 Fahr.; nay, on some days no variation whatever happens. In these elderly people the temperature still further differs from that of young persons; for in the former the diurnal fall occurs at any hour, and not, as is the case with young persons, during the hours of night. Concerning the influence of food on the temperature of the body, the authors have concluded that none of the diurnal variations are in any way caused by the food we eat. The experiments to prove this conclusion are very numerous. Some were made with the breakfast, others with the dinner and tea; but all point to the conclusion just stated. This important question is very fully discussed in the section devoted to it. By cold baths both the surface of the body and the deep parts were lowered in temperature. The temperature of the surface was in some instances reduced to 88° Fahr.; but the heat so soon returned to all parts as to show that the cold bath is of very little use as a refrigerator of the body. The cold bath produced no alteration in the time or amount of the diurnal variation. This began at the same hour, and reached the same amount as on those days when no bath was taken. By hot-water or vapor baths, the heat of the body could be raised very considerably. Thus, on some occasions, when using the general hot bath, the temperature under the tongue was noted to be between 103° and 104° Fahr.—a fever temperature. The body being heated considerably above the point at which combustion could maintain it, it was then shown with what rapidity heat may be lost, simply by radiation and evaporation. The experiments tend to prove that hot baths in no way affect the diurnal variation of the temperature.

5.—*Immunity of Pigeons from the Narcotic Action of Opium.* By Dr. B. F. Richardson. [Lancet, April 10, 1869.]

At a late meeting of the Medical Society of London, Dr. Richardson referred to the question of the immunity of pigeons from the narcotic action of opium, and stated that, from certain experiments he had recently made, he was sure that this immunity was an indisputable fact. He had given to a pigeon twenty, thirty, and forty grains of the drug, and that repeatedly, in the liquid as well as the solid form, without the least ill-effect on the bird. He took from a bag, while speaking, a pigeon to which he had given fifty grains for six days consecutively, and during the evening he administered sixty more grains of opium, the bird subsequently remaining well and lively. Dr. Richardson had not found that even constipation had followed his experiments. As yet he had not examined the secretions or excretions to see what becomes of the opium. It was a point of considerable interest to determine whether all birds, even those which are carnivorous, were insusceptible to opiates; whether they were uninfluenced by other vegetable poisons; and whether the bird, aided by its high temperature, decomposes the opium given: the drug certainly does not cause the heat of the pigeon to lessen.

Several speakers continued an interesting discussion. Dr. Thudichum referred to other instances of immunity, such as that of the rabbit from the action of digitalis, which it eats with impunity; and that of the ichneumon from the snake-poison. Dr. Broadbent and others suggested that poisons which acted upon the spinal system of nerves were alike hurtful to all living creatures, but that the difference in action of narcotics and some other remedies might be accounted for by the presence of the higher nerve-centres in the one, and their absence in another animal, these being the parts which were specially acted upon by certain drugs.

Dr. Sansom then discussed, in an interesting paper, the subject of Fermentation in Living Bodies, with the view of showing that many diseases depend thereon, and that the use of sulpho-carbolates was beneficial, for the reason that these remedies check fermentative action. After sketching the history of the zymotic theory of disease, and the analogy between zymosis and infectious disease, the author traced the evidence which seemed to point to the influence of organic germs in the genesis of the twain conditions; and divided "disease-producing germs" into two classes—the one in which the seat of their development and growth was in the blood itself, and the other in the intestinal canal only. He detailed experiments with the view of showing that fermentation can occur within the living body with ill results. The effect of carbolic acid was to prevent such changes, and it was efficacious, not only as a preventive, but as a disinfectant, therapeutically. But there were difficulties in the way of the administration of carbolic acid itself, and Dr. Sansom had found that the absorbable sulpho-carbolates at once gave up the carbolic acid when they reached the interior of the body; and for that reason, and because he had found them of special service in the dyspepsia of phthisis and suppuration (probably connected with some kind of zymosis), he asked that their efficacy might be put to the test. His own experience had taught him that the value of the remedies in zymotic diseases was very great.

Had time permitted, a discussion would have taken place, but it was postponed, after a declaration from Dr. Richardson that he should resolutely dispute the author's conclusions as to the zymotic theory of disease.

6.—*Origin of Epithelial Cancer.*—[Editorial, Lancet, May 8, 1869.]

In a recent number of the *Centralblatt*, a paper on the Origin of Epithelial Cancer appears, written by M. Leontowitsch, in which he remarks that, with few exceptions, observers refer the origin of epithelial cancer, or cancroid, to the connective tissue. Recently, however, Thiersch and Billroth have denied this mode of origin, and hold that the epithelial elements play the most important part. The investigations of M. Leontowitsch were conducted on thirty-eight cases, operated on in the University of Charkow, during the years 1865–'66. His results were as follows: The stratum Malpighii, at the site of the disease, was usually normal, and though sometimes more or less atrophied, at the point of transition of the skin into the mucous membrane, it was always very thick. The sebaceous follicles were always hypertrophied, penetrated deeply into the skin, and contained well-developed nucleated cells. The sudoriparous follicles, on the other hand, were essentially unaltered. The muscles presented two kinds of alteration: 1st, atrophy due to the pressure of the young cells developing in the connective tissue; 2d, thickening of particular fibres, which had lost their transverse, but retained their longitudinal striation. The refractive power of these fibres was increased, and, as in colloid disease, their borders had become strongly defined. All the three coats of the blood-vessels, and especially of the arteries, were thickened and condensed. The most remarkable appearances, however, were presented by the nerves. In these the neurilemma was thickened, and presented numerous connective-tissue cells; and in a few cases a differentiation of the latter into epithelium cells, which either invested the neurilemma as a single layer, or formed cancroid masses united into groups. In the interior of the nerves, again, transverse section exhibited a proliferation of connective-tissue cells, the pressure of which had caused, in places, almost complete atrophy of the nerve-tubules. An independent development of cancroid appears to take place in the muscles and fibrous tissue. The masses are deep-seated and isolated, consisting of young, and sometimes of old, dry, and shining epithelial cells, many of the former of which are in process of multiplication, and themselves ultimately differentiate into epithelial cells. The cells in the muscular fibres develop at the cost of the corpuscles of the muscles. In the subcutaneous fatty tissue the masses proceed from the proliferation of the cells of the stroma, and, as they increase in number, gradually compress and produce atrophy of the fat-cells. M. Leontowitsch only once observed the development of cancroid in a lymphatic gland, and here also the epithelial elements originated in the connective-tissue corpuscles of the gland-stroma. The epithelium of the mucous membrane covering the lips was always hypertrophied, and the broad epithelial growths could be seen even with the naked eye to dip deeply into the submucous tissue. Microscopic examination showed that the papillæ of the mucous membrane were atrophied, and appeared between the new growths as small connective-tissue striæ. The new growths branch like roots at their deeper part, and are composed of cells exactly analogous to those covering the mucous membrane. The mucous follicles are enlarged, but retain their normal structure. The development of cancroid from the epithelial cells lining the mucous follicles was only noticed in one instance. It was observed to originate twice from the interior of a sweat-gland. In conclusion, M. Leontowitsch states that, out of the thirty-eight cases examined, twenty unquestionably originated from connective tissue or its corresponding structures. In twelve cases it proceeded from the epithelial structure, and in six cases its origin could not be accurately ascertained. Hence he is of opinion that all the varieties of the connective tissue, as well as of epithelium, are capable of developing cancroid.

THEORY AND PRACTICE.

1.—*Paracentesis Pericardii: Recovery.* Reported by C. G. Wheelhouse, Esq., Surgeon to the Leeds Infirmary. [British Medical Journal, October 10, 1868.]

In the *Medical Times and Gazette* of November 3, 1866, my friend and colleague Dr. Clifford Allbutt very briefly placed on record a case of acute rheumatism complicated with distended pericardium, in which immediate death was warded off by the operation of paracentesis.

I should not have ventured to trespass upon the time of this meeting with the details of a solitary case, and especially of a case which has already been published, if I had not thought—1. That the treatment adopted was of more than usual importance; 2. That the result justified me in hoping that, by making it still more fully public, I might possibly furnish the means of hereafter saving an occasional life by surgical interference when the resources of medicine appear to be exhausted; and 3. That the mode of operation adopted needed some further explanation. I need not occupy your time by describing the whole course of the patient's illness, but will simply take up the case at the point at which my help was first sought.

On September 18, 1866, C. S., a gas-pipe layer, was admitted into the Leeds Infirmary under the care of Dr. Allbutt, suffering from very acute rheumatism, both muscular and arthritic, accompanied by dyspnœa and oppression. On examination, the pericardium was found to be considerably distended with fluid, and there was acute pain in the region of the heart. A large blister over the heart and full alkaline and opiate treatment were ordered for him.

On the 19th, at 11.30 P. M., Dr. Allbutt was urgently summoned to the assistance of this poor man, who was said to be dying. On reaching his bedside, he found that this statement was unfortunately only too true; and having, in the practice of the late Professor Trousseau, seen three or four instances in which the operation of paracentesis pericardii was resorted to for the relief of similar conditions, he determined to seek surgical aid for his patient.

I reached the patient within half an hour, and found him sitting up in bed, his head resting on his hands, his elbows on his knees, struggling for breath. He was covered from head to foot with a copious cold sweat, and his hair was dripping; his skin was dusky and cold, his eye sunken and glazed, and for two or three hours he had been unable to speak.

The case needed but a few words of explanation from Dr. Allbutt, who, telling me that he believed all medical treatment was exhausted, asked my opinion as to the possibility of saving the man by paracentesis. I believed that there was, so far, no successful case of this operation on record; but, with dissolution staring the man so closely in the face, I felt that, at all events, he could not possibly be placed in a more critical condition by the operation, and therefore determined to give him the chance. I rapidly mapped out the area of pericardiac dulness; and, bearing in mind the *normal* position of the heart, I assumed what would probably be its *altered* position. My object was to strike the sac at the lowest possible point, and to avoid coming into contact with the thin walls of the distended auricle.

I chose for my purpose a small trochar. This I placed on the upper margin of the fifth rib, half an inch to the left of the sternum; and, inclining it upward and inward, thrust it steadily forward through the intercostal space toward what I believed to be the centre of the ventricle. I pushed it onward until I could distinctly feel the movements of the heart with the instrument; and then, sheathing the point, I advanced the canula well up to the heart, until I could feel and see, and demonstrate to those around, the impulse of the heart as communicated to the instrument. The trochar was then withdrawn, and the fluid allowed to escape. This it did at first in a steady stream, which soon subsided into a saltatory flow coincident with the heart's contractions. The fluid consisted of a pale pink coagulable serum, and, upon the whole, about three ounces escaped. During the operation the patient gradually obtained relief; and, after the canula was withdrawn, the bed-rest was removed, and he was able to lie down. The breathing was relieved, and was now only 36 per minute; and he was able to whisper to us that he felt unspeakable relief. The pulse had lost its rapid and struggling character, and could easily be counted, its number being about 110. The area of dulness was decidedly diminished. The operation was followed by several threatenings of syncope, which were, however, warded off by large and repeated doses of brandy, all other medicines being omitted.

Next day the cardiac dulness had not increased; but in the evening the breathing became more labored, and considerable delirium came on. Another large blister was placed on the region of the heart, and half a drachm of liquor morphiæ was given; ten drops were also ordered to be repeated every six hours. From this time the patient steadily improved, and on October 13th was discharged cured. On his discharge, the pericardial dulness was little, if any, beyond the normal extent. There was a loud blowing systolic murmur heard over the apex.

Such is the case, as you will find it briefly recorded by Dr. Allbutt; and my only object in bringing it again before you at the present time is: 1. That I may say that the cure has continued perfect, and that the patient is still alive, and able to follow his employment; and 2. That I may contrast the method by which I performed the operation and attained perfect success, with that adopted by Professor Trousseau in, I believe, every instance with a fatal result.

I used the simplest means I could think of; disturbed the natural relations of the important viscera with which I had to deal as little as possible, and was content with present relief, leaving all after-conditions to chance. I felt that, with a small trochar and canula, I could do very little harm, unless I had the ill-fortune to strike the distended auricle; for I could not doubt that a light hand would so easily recognize the touch of the ventricle that any chance of its penetration was remote; and, having succeeded in withdrawing the fluid, and in obtaining decided relief to the laboring heart, I was content.

In Professor Trousseau's case, on the other hand, a very different plan was adopted. A free incision along the intercostal space was followed by a studied exposure of the bag of the pericardium; the pericardium itself was next laid freely open and evacuated; and finally, in the hope, I presume, of insuring its after-adhesion to the walls of the heart, it was washed out with an iodized solution. I feel that had I, in the present instance, adopted this more heroic plan, my patient would undoubtedly have died before I could have completed the operation.

I attribute my success, then, to the simplicity of the means adopted; and I think that the case proves that, when all other means have failed, a distended pericardium may be tapped with safety, and with a fair prospect of rescuing a patient from the jaws of immediate death.

2.—*Scarlet Fever and its Prevention.* By W. Budd, M. D. [British Medical Journal, January 9, 1869.]

There is good reason to believe that not only the eruption on the skin, but every thing that is shed by the body of the infected, is heavily laden with the germs or seeds by which (alone, no doubt) the disease is propagated. The discharges from the throat and nose are, I imagine, especially virulent. It is more than suspected, on grounds on which I need not here insist, that those from the bowel are scarcely less so. As the kidney is known to be affected in a very special, and often in a very severe way, by the poison, this organ probably furnishes another outlet for it. All analogy tends to indicate, indeed, that in this case the renal epithelium, which is cast off so plentifully, performs the same eliminative function as that which is cast off in still greater profusion by the outer surface of the body. As the bulk of all these excreta soon finds its way to the cesspool or sewer, the large part which sewers and cesspools are known to play in the dissemination of the fever, and which, quite lately even, has been so strangely misinterpreted, is easily understood. I could enlarge much on this topic, if I had time to do so. It must suffice for the present to say, once for all, that all that has been shown to hold of typhoid fever in regard to these relations—contamination of drinking-water included—may be applied, with little qualification, to scarlet fever also.

Taking these things as our data, the one thing to aim at, therefore, in seeking to prevent the spread of this fever, is to annihilate the germs proceeding from these various sources on their very issue from the body, and before the patient leaves the sick-room.—In accordance with this view, I have long been in the habit, in all cases which fall under my own care, of enforcing the following simple precautions:

1. The room is dismantled of all needless woollen or other draperies which might possibly serve to harbor the poison.
2. A basin, charged with chloride or carbolate of lime, or some other convenient disinfectant, is kept constantly on the bed, for the patient to spit into.
3. A large vessel, containing water impregnated with chlorides or with Condy's fluid, always stands in the room, for the reception of all bed and body linen immediately on its removal from the person of the patient.
4. Pocket-handkerchiefs are proscribed; and small pieces of rag are used instead for wiping the mouth and nose. Each piece, after being once used, is immediately burnt.
5. As the hands of nurses of necessity become frequently soiled by the specific excreta, a good supply of towels, and two basins, one containing water with Condy's fluid or chlorides, and another plain soap and water, are always at hand, for the immediate removal of the taint.
6. All glasses, cups, or other vessels, used by or about the patient, are scrupulously cleaned before being used by others.
7. The discharges from the bowel and kidney are received, *on their very issue from the body*, into vessels charged with disinfectants.

By these measures, the greater part of the germs which are thrown off by internal surfaces are robbed of their power to propagate the fever. Those which are thrown off by the skin require somewhat different management. If my information do not mislead me, it is in dealing with these that the practice of medical men generally is most defective. There are, no doubt, distinguished exceptions; but, for the most part, either nothing is done, or, what is done, is done imperfectly or too late. And yet to destroy, from the first, as far as possible, the infectious power of what emanates from the skin, is, for obvious reasons, the most important object of all in the way of prevention.

In the first place, as the skin is at once the most extensive surface of the body, and is, *par excellence*, the seat of what, by a very just figure, is called the *eruption*, the crop of new poison which escapes by the skin probably far exceeds in amount that which escapes by the other surfaces. It is impossible to speak in exact figures here. We cannot count these things as we can count peas, or beans, or grains of wheat. But the case of small-pox furnishes us with a standard which cannot far mislead us. And, as we know that, in a case of confluent small-pox, enough new poison is thrown off actually to inoculate with small-pox myriads of others, so there is every reason to believe that the skin-crop in a severe case of scarlet fever is little, if at all, less prolific.

In the next place, as the process of desquamation, by which this crop is finally cast loose, is a very slow one—lasting, for the most part, over many weeks—the infection from this source is much more abiding than that from the internal sources. But what renders it still more so is the all-important fact that the poison which is liberated by the skin is liberated in the dried state. It is well known—and, indeed, the circumstance has been taken advantage of in the practice of inoculation by cow-pox and other poisons—that animal poisons, when dried at a gentle heat, retain their powers for quite indefinite periods of time. But to be dried at a gentle heat—a heat lower, in fact, than that which attended its own generation—is precisely the case of the scarlet-fever poison, as cast off by the skin.

Another danger is created by the minute and impalpable form in which the particles armed with the poison are set free. The skin peels off in part, no doubt, in flakes of palpable size, but in still greater part under the guise of dust, which floats in the air, impalpable, like motes in the sunbeam. Each of these little atoms is, potentially, the scarlet fever. While they adhere to the body, they may be readily disarmed; but, once afloat, they are in great degree beyond our power.

It is to these various circumstances—to the countless profusion of the new seed, if I may so speak, which is generated and sown broadcast by every fresh case—to the length of time during which it hangs about the sick, capable every moment of being transferred, with all its deadly power, to thing or person—to the impalpable minuteness of the organic particles in which this seed is embedded—and, lastly, to their long retention of their properties, in virtue of being in the dried state—that we must look mainly for the true explanation of the well-known subtleness and tenacity of this particular infection. To the many striking illustrations of this subtlety and tenacity already on record, I could, if there were need, add many of my own, quite as striking, and free from all ambiguity; but it is a waste of time and space to burden the page with what is already conceded, and with what most men must be sufficiently familiar.

These same circumstances are the source of the peculiar embarrassment and perplexity which, in scarlet fever, hangs over the disposal of the convalescent, and the period, so much debated, and at present confessedly undetermined, at which he may be safely restored to society.

According to my own experience, these difficulties and perplexities may be entirely averted by the employment of the simplest precautions. To be successful, these precautions must be put in force early, and must be thoroughly carried out. The first thing to aim at is, to prevent the minute particles, which are the carriers of the poison, from taking wing until they can be disinfected *in situ*. This, I find, can be perfectly effected by simply anointing the surface of the body, scalp included, twice a day with olive-oil. The oil I use is, generally, slightly impregnated with camphor. As far as the main object is concerned, the addition is perhaps unimportant; but it is agreeable to the patient, and probably has some part in the relief, which almost always follows the inunction, from the troublesome itching which is a well-known incident of some stages of the disorder. Current views would, perhaps, indicate carbolic acid as a fitter adjunct; but, having found the camphorated oil to answer perfectly, I have thought it the part of wisdom to make no change. I may add, that the process, so far from being trying, is very soothing to the sick; and, if it exert any influence at all on the evolution of the disorder, this influence appears to be beneficial rather than otherwise. The precise period at which it should be begun varies somewhat, no doubt, in different cases. As early as the fourth day of eruption, a white efflorescence may often be observed on the skin of the neck and arms, which marks the first liberation of the new death-giving brood. This efflorescence should be made the signal for the first employment of the oil. From this time, the oiling is continued until the patient is well enough to take a warm bath, in which the whole person—scalp again included—is well scrubbed, disinfecting soap being abundantly used during the process. These baths are repeated every other day, until four have been taken, when, as far as the skin is concerned, the disinfection may be regarded as complete. If the health be quite recovered—if, in particular, there be no disease of kidney and no discharge from throat or nostril—the patient (equipped, of course, in a new or perfectly untainted suit) may generally be restored without risk to his family. A week or ten days' additional quarantine is, however, seldom objected to; and is, on the whole, perhaps more prudent.

Many medical men are in the habit of fumigating the sick-room, either constantly or several times a day, with chlorine or sulphurous acid, pending the whole course of the fever. There can be no objection to this measure; but I do not myself attach much importance to it. Experience of the largest and most decisive kind has shown that chlorine—and I believe the observation applies equally to the other chemical agent—in the degree of atmospheric impregnation respirable by man, has no appreciable influence in preventing the spread of infectious disorders.

To complete the preventive code, immediately after the illness is over —whether ending in death or recovery—the dresses worn by the nurses (which, where possible, should be of linen, or some smooth thing) are washed or destroyed, and the bed and room that have been occupied by the sick are thoroughly disinfected. With these measures, when well done, the taint is finally extinguished.

The success of this method, in my own hands, has been very remarkable. For a period of nearly twenty years, during which I have employed it in a very wide field, I have never known the disease spread in a single instance beyond the sick-room, and in very few instances within it. Time after time I have treated this fever in houses crowded, from attic to basement, with children and others, who have, nevertheless, escaped infection.[1] The two elements in the method are, separation on the one hand, and disinfection on the other. It is almost needless to add that neither can be secured, in the degree here indicated, in the houses of the very poor. There are, unhappily, large masses so utterly destitute of every needful thing, that it would be little short of mockery to speak of such measures as those I have just described in connection with them. But the conditions which are denied to the houses of the needy, should always be at hand in the fever hospital; which—small, if you like, but a model of its kind—would, if modern societies knew what belongs to their safety, never be far to seek in any crowded communities. In these matters, beyond all others, the social organization should be, in its perfection, strictly correlative with that of scientific knowledge. If science can point out practicable conditions by which such great evils may be averted, society is, in the highest degree, not only unwise, but blameworthy, if these conditions are not realized. It is high time, at any rate, that some more concerted action should be taken to abate the ravages of this terrible scourge. Every year scarlet fever slays from twenty to twenty-two thousand persons in England alone. There are few families that have not at one time or another felt its deadly power; and it is now and then the cause of tragedies which, although occurring only in single families, are of such agonizing bitterness as to move the heart of the nation. If the measures here suggested were systematically and energetically put in force against this great enemy of man, the annual number of the slain would soon fall from twenty thousand to a low figure.

---

[1] One word should be said for the benefit of those who, having yet escaped infection, are living in an infected neighborhood. For persons so situated, it is well to know that the frequent flooding of their house-drains with disinfectants is a great safeguard. In all places where scarlet fever is prevalent, especial care should be also taken to have the drinking-water perfectly pure.

P. S.—I need scarcely say that the principles laid down in the preceding paper are equally applicable, as I have elsewhere abundantly shown, to all contagious fevers. I have for many years applied with great success the method here recommended for scarlet fever, with the modification in detail required by each particular case, to the prevention of small-pox, measles, typhus, etc. In typhus, the area and activity of infection may be greatly limited by disinfecting all internal discharges, and by oiling and disinfecting the skin in the same manner as in scarlet fever.

Miscellaneous and Scientific Notes.

We reprint in this number of the Journal an article from the *Quarterly Review* of April, 1869, on the "Aims of Modern Medicine." Although somewhat lengthy for our pages, it will abundantly repay perusal, for it brings out, in sharply-defined contrast, the situation and tendency of the medicine of to-day, as compared with the old order of things. Ostensibly, the article is a review of Reynolds's System of Medicine. It is not, however, a review of that work, but the title of the work is rather taken by the author as a peg on which to hang his remarks. We feel that we are doing good service to the profession by reproducing the article.

Jacksonville, Ill., *May* 24, 1869.

Editors New York Medical Journal:

The May number of your valuable journal contains an interesting paper from the pen of Dr. C. F. Taylor, upon the "Differential Diagnosis of Disease of the Spine." The labors of this gentleman, in the orthopedic branch of medical science, must secure to him the thanks of the profession, and the grateful remembrance of hundreds of suffering invalids, and it is not strange that time should not have been sufficient for him to recover all that has been written by his predecessors.

It is with approbation, and not with any intention of unfriendly criticism, that I beg leave to make the following quotation from the article referred to: "Now let us look at the symptoms which attend the inception of the disease. One of the most persistent of these symptoms (and I believe that I was the first person who called attention to this diagnostic sign) is what may be called gastralgia—pain in the abdomen, when the disease is in the lower dorsal or the lumbar region," etc. It is always confirmatory of the value of a discovery to find that the same discovery has been made before.

Thomas Copland published in London, in 1815, a short work on "Diseased Spine," from which I make this brief quotation:

"Most of the prominent symptoms of this complaint (vertical curvature) are derived from interruption of the nervous function in the parts below the seat of pressure. . . . . When the disease is in the superior dorsal vertebræ, the great characteristic symptom and circumstance *is a commencing paralysis of the abdominal muscles.* It is surprising how very early in the disease this symptom may be detected when the attention is directed to it. It is sometimes described as an oppression in breathing, tightness of the stomach, a band tied around the belly, torpor of the abdomen, and by other expressions in different patients. . . . . So early does paralysis of the abdominal organs present itself, that it is very generally treated for the disease which it resembles. I have seen it called asthma, dyspepsia, and even diseased liver, from the sense of uneasiness and constriction over the region of the stomach and liver. Sometimes it is taken for disease of the colon or rectum, from the accompanying costiveness and pain; the bladder also being sometimes unable to perform its office; the cause of the impediment is sought in the urethra and kidneys."

Copland made no claim to originality in his diagnosis; and Pott, from whom the disease has been named, mentions, as one of the symptoms, "an uneasy sensation in the pit of the stomach." Mr. Pott, however, maintained that "when those complaints are not attended with any alteration of the figure of the backbone, neither the real seat nor the true nature of the distemper is pointed out by the general symptoms, and consequently they are frequently unknown, at least while the patient lives."

The practice of the orthopedists of the present day is to follow Copland rather than Pott, both in the reliance upon general symptoms for early diagnosis, and upon mechanical support in the treatment.

It need not be supposed that I have made any research into old books in order to write this little criticism, for I have simply copied the quotation over again out of the little book on *Orthopedics*, which Lindsay & Blakiston published for me in 1866.

It will certainly tend to a better understanding of the relative merits of the present and of the past, in the medical, and in all the other arts and sciences, if, whenever any one thinks he has made a discovery, his coöperators in the same pursuit shall set to work to show how much in the same direction was known before. The gulf that lies between an invention and its disuse, and the reinvention or discovery at a future period, renders a full knowledge of the ancient art impracticable to all but bookworms, and the reproduction, in the literature of the subject, of the forgotten knowledge is not at all to disparage the modern, but to exalt the ancient discoverer.

D. PRINCE.

DEATH OF DR. A. H. STEVENS.—At the stated meeting of the New York Pathological Society held June 23, 1869, the following preamble and resolutions were unanimously adopted:

Whereas, Alexander H. Stevens, M. D., one of the oldest and most honored members of this Society, has been recently removed by death;

Resolved, That we hereby express our deep sorrow for the loss occasioned by his decease.

Resolved, That we bear testimony to his eminent classical and scientific attainments, great moral worth, excellence as a practitioner of medicine and surgery, superior ability as a teacher of surgical principles and practice, and accuracy of judgment as a counsellor in sanitary affairs.

Resolved, That a copy of these resolutions, duly authenticated, be transmitted to the family of the deceased, and the medical journals of this city.

LEWIS A. SAYRE, M. D., President.

GEORGE F. SHRADY, M. D., Secretary.

DEATH OF DR. ALDEN MARCH.—Dr. March died in Albany, June 17, 1869. We take the following appreciative notice of his life and career from the *Albany Evening Journal:*

Dr. Alden March was born in Sutton, Worcester County, Mass., in 1795. His early life was passed on a farm, and the rudiments of his education acquired in public schools, in which, for a short time, he was a teacher.

He studied medicine with an elder brother, who was surgeon in the United States Army, and attended medical lectures in Boston. He graduated at Brown University, Providence, R. I., which, at that time, had a department of medicine. Williams College conferred the degree of LL. D. on Dr. March, and he was honorary member of most of the leading societies of this country. While a student of medicine, he was distinguished for his zeal and industry in the study of anatomy, and this laid a firm foundation for his future surgical renown. In the pursuit of his studies, no difficulty seemed too great, no obstacle too formidable for him to overcome. And the same indomitable will, perseverance, and enthusiasm, have characterized his whole professional life. He came to Albany in 1820, and immediately commenced the practice of his profession, which he pursued with untiring devotion and success until his death.

His often-repeated wish, that he might "die with his armor on," has been amply fulfilled; for, until within the last few weeks, he has been most actively engaged in the laborious duties of his profession.

Immediately previous to his sickness, he made the journey to New Orleans, to attend a meeting of the National Medical Association, of which he had been an honored member and President. On his return, he was in usual health, engaged actively in surgical practice, and only found time occasionally to look after the affairs of his farm, a few miles out of town. He was passionately fond of agricultural pursuits, and in this way exposed himself to cold, which kindled into activity a chronic disease, from which he had long and uncomplainingly suffered. He was attended by his beloved colleagues and friends, Dr. James McNaughton, Dr. James P. Boyd, and his brother-in-law, Dr. Armsby, and during his last illness was visited by most of the medical gentlemen of the city.

His death, in the full vigor of mental and physical activity and usefulness, will leave a void in our city and in the profession, that will be most deeply felt and deplored. Dr. March was one of the most remarkable and gifted men of his time. No medical man in this country was more widely known, or more highly respected and esteemed. It was the common remark and testimony of medical men, that Dr. March was the highest and best surgical authority in this country. Among the prominent medical men of Europe, whose acquaintance he had made during his frequent visits abroad, he was everywhere received with distinguished notice and honor. No improvement in his profession escaped his attention and investigation. His bold and independent habits of thought and action were always conspicuous, and he originated many new and important improvements in surgical science. As a bold, dexterous, and skilful operator, Dr. March had no superior in this or any other country. This is the universal testimony of the profession, and especially of those who have enjoyed the most extensive opportunities of foreign travel and observation. Few persons ever combined so many of the elements of a great and successful surgeon. He had a frame of wonderful power and endurance, a mind of electric quickness and ceaseless activity, with skill in discrimination, and tact and dexterity in execution, which carried him successfully through the most difficult and trying ordeal of surgical practice. He was a most thorough student of anatomy, having taught this branch ten years, before he occupied the chair of surgery in our Medical College. Thus armed with accurate knowledge and skill, he was never dismayed by the magnitude or danger of a surgical operation, upon which, perhaps, the safety or life of his patient depended. Having prepared himself for every emergency, he would commence an operation with calmness and self-possession, which inspired hope and confidence in his patients, and excited admiration and astonishment among his assistants and associates. He never seemed to consider that his own reputation was at stake, when the most hazardous operation gave but a slight and only hope of saving the life of a patient.

At all hours of the day or night, his best services were cheerfully and promptly rendered, without partiality, to the poor and the rich alike, and while he required just compensation from one class, he rendered as faithful and willing service to the other.

But the great beauty of his character was in his domestic and Christian life. No man was more loving, or more beloved in his house, than Dr. March, and no one in the church, of which he was a main pillar, was looked up to with more respect and confidence. His whole life was characterized by simplicity, honesty, and integrity, as evinced in the faithful fulfilment of every trust confided to his care during a long life of public service and honor.

He was the father, and one of the founders of the Albany Medical College, and its offspring, the Albany City Hospital. More than forty years ago he delivered a public lecture "on the propriety of establishing a Medical College and Hospital in the city of Albany." Among the last acts of his eventful life, he donated to these institutions each $1,000. To the college he bequeathed his pathological museum, the most extensive and valuable in this country, with $1,000, the interest of which is to be perpetually employed for its care and preservation. To the hospital he had given the same amount, the interest to be expended for the purchase of surgical instruments for use in the hospital.

The name of Dr. March has long been a household word throughout the land. His students are numbered by thousands, in whose hearts his memory is embalmed forever. Every one has some kind and cherished remembrance of his honored and beloved preceptor. Wherever students or graduates of the Albany Medical College are found, and they are scattered throughout the length and breadth of the land, it is claimed, as their highest honor and merit, that they "have been students of Dr. March, of Albany."

When the deceased came to this city, it had a population of less than fifteen thousand. With the enterprise and activity which have characterized his whole life, he at once conceived the idea of establishing a Medical College and Hospital here. At that time there were but one hospital and two colleges in the State. He began a course of lectures on anatomy in 1821, in the attic of an old building in Montgomery Street, above Columbia. His first class of students numbered fourteen, most of whom were young physicians. His material for demonstration was brought overland from Boston, at great expense and personal risk. These lectures were continued, and petitions were circulated among our citizens, year after year, for a charter for a medical college. At length, with the aid of his associate, Dr. Armsby, and the support of prominent citizens of Albany, a charter was obtained from the Legislature, and our Medical College was organized, and commenced operations January 3, 1839. Dr. March has been at the head of this institution thirty years, after having labored eighteen years to prepare the way for its establishment. This institution, the fruit of his labors and enterprise, the church which he has contributed so largely to build up, and the hospital with which he has been so prominently identified since its foundation, and the various other public enterprises with which he has been connected, will associate his name with the history and progress of Albany, as enduringly as that of any other citizen.

The whole city and country will mourn the loss of Dr. March, and pay fitting tribute to his memory.

CENTRAL NEW YORK MEDICAL ASSOCIATION.—The second annual meeting of the Central New York Medical Association was held at the Common Council chamber, Rochester, June 15, 1869.

The following gentlemen are the officers of the Association: *President*, E. M. MOORE, Rochester; *Vice-Presidents*, ALFRED BOULTRE and SAMUEL WEST; *Secretary*, T. S. BRINKERHOFF; *Secretary pro tem.*, EDWARD HULL; *Treasurer*, ALFRED MERCER.

Dr. William T. Plant, of Onondaga, read a paper upon the "Ordeal Bean of Old Calabar," in which he reviewed the old ordeals of the Jews and other ancients, gave a history of the discovery of the bean, and of the experiments which led to its use for certain diseases of the eye, and for the purpose of producing relaxation of the muscles, in hydrophobia, etc., and also as an antidote for certain poisons, and its use in the treatment of tetanus, with cases illustrating its use in this disease.

Dr. Edward Hall, of Cayuga, read a paper on "Double Uterus," relating several very interesting cases in his own practice, and referring to leading authorities upon the subject.

Dr. Samuel Weed, of Wayne, read an essay upon "The Use of Ice as a Therapeutic Agent," in which he discussed the comparative value of warm and cold applications in various diseases, and cited illustrations from his own practice.

The subject of the essay was discussed at some length, and various additional suggestions made by Drs. Sabin, W. S. Ely, Little, Weed, and others.

A paper on Asthenopia was read by Dr. E. M. Curtiss, of Oswego. He discussed the diagnosis and pathology of the condition of the eye in full, describing the different forms of the disease, and its causes and treatment.

The President, Dr. E. M. Moore, gave the Association a very practical and useful address on the rare accident, the "Colles' Fracture," giving full details of several cases which he was able to examine anatomically within a few hours after the injury was received. He entered into the anatomy of the points very minutely, and stated very interesting and original views of such accidents, and their treatment. Two of the doctor's patients, who were suffering from this fracture, were introduced by him, and he explained to the Association his manner of dressing the injury.

Dr. George W. Coolie, of Oneida, read a very elaborate paper upon Hernia, reviewing the various modes of treatment in detail, illustrating the subject with interesting cases.

The hour for adjournment drawing nigh, Dr. E. M. Moore, the President, delivered the annual address to the Association, substantially as follows: He stated that he had recently met one of the Regents of the University, who asked him, in the course of their conversation, "Why can't you medical gentlemen agree among yourselves? You have sects in medicine as well as we have in religion!" This induced reflection on the subject to determine whether this assertion could be sustained. In looking over the ground, we naturally look into the origin of the medical profession. At the time of Hippocrates, medicine had hardly been separated from religion. In that splendid period of Grecian history the mind rapidly underwent a change, and acquired, almost at a leap as it were, some of the peculiarities which exist at the present day. The most natural thing for men is to refer any superior good to some superior being. This certainly was the custom in old Greece. Every thing extraordinary that happened was referred to some god, dryad, or nymph—some agency which directly produces these things—hence all pestilences or plagues were referred to these agencies. This same thing exists largely to this day.

In a literary association in this city, there is a gentleman who is quite marked for his ability, and, upon the occasion of one of our evening sessions lately, it devolved upon me to produce a paper, which I did, and I took for my topic Moral Insanity. As all medical men know, the profession stands almost alone upon this subject. Among those present were clergymen, lawyers, merchants, and others. To the doctor's great surprise, the lawyers acceded to the correctness of his remarks. The clergymen, one by one, did the same thing; yet there was one gentleman, who was inferior to none of them in mental attainments, who admitted all his statements to be correct, but who said, as regarded the cause, he could not agree with him; that he thought it could not be referred to any physical change, but that that result was occasioned by spirits acting upon the mind. Here we have the same thought which was prevalent three thousand years ago. Of course, the number of those who accept such interpretation is very different as compared with other periods. Hippocrates stood ahead of Socrates and Plato, and every other one of their times. He says, of course, when the plague attacks the people, it *may* be by Divine wrath, but he goes further, and says that there must be a cause. This idea has been struggling for recognition all along through the years which have elapsed since his time. The medical profession started out looking for the cause, and have been ever since looking for it. But it so happens that those who have been tied up by the various religions of the world are still in the same condition in which they have been for hundreds of years, and they necessarily have to refer to superior beings, and are therefore under the necessity of establishing certain rules, certain dogmas, certain conditions of association. Hippocrates naturally fell into the same thing, and endeavored to find some general rule which might be termed a law. Hence we find at one time there was the Mathematical sect contending with the Methodists; and then the Rationalists contending with the Empirics. It is only within the last thirty or forty years that we have been emancipated from these things. This accusation now has no force as against us. When the result of true observation is known, it will be seen that we have not been divided into sects. We have now arrived at that condition of extreme liberality that there is no opinion we can hold which will not entitle us to the same liberality from our brethren; our bond has changed from a dogmatical to an ethical one. I think this is our attitude at the present time. If I do not choose to give calomel at any time, I am not therefore an eclectic. If I do not choose to bleed, I am not therefore a Thomsonian. The medical profession claims every thing, and we must acknowledge to every one in our association the right to administer any thing and every thing according to his own judgment. Our ethical bond prevents us from saying we are right and the rest are wrong, and when it prevents this it removes all temptation to do any thing other than that which might be for the interest of the patient. The relation then becomes personal and purely personal. Any kind of practice which vaunts itself from that we represent, does so from sordid motives. We have no creed; we have no dogma; there is no such thing as a system of medicine. In old times, when these might obtain, it might be proper to say that there were sects in medicine; but when the Catholic can shake hands with the Universalist, and the Churchman can cordially greet the Dissenter, then they can begin to understand the liberality of the medical profession, and not before. You might as well take the humble Christian, who says he has done nothing, and compare him with the Mohammedan who keeps an account with God, as to compare medicine with any thing else which pretends to its qualifications. In medicine we have no different sects, in religion we have.

The Association adjourned, to meet at Syracuse on the 3d day of December next.

WE noticed briefly in our last issue the organization of the *Association of American Journalists.* The Secretary, Dr. W. S. Mitchell, of New Orleans, has been kind enough to send us a full report of the proceedings of the Association, from which we make the following extracts:

The Committee on Organization, through their chairman, Dr. Theophilus Parvin, of the *Western Journal of Medicine*, presented the following preamble and plan of organization, which were unanimously adopted:

The editors of medical journals in the United States, desiring to cultivate professional courtesies, to facilitate the conduct and general management of our journals, to promote their interests, their usefulness, and make them a still greater power for professional and popular good, and especially to advance the interests of medicine, hereby unite together under the following

ARTICLES OF ASSOCIATION.

Name.—The Association of American Editors.

Purposes.—The cultivation of friendly relations, mutual assistance, community of effort and means, where practicable in a system of receiving foreign exchanges, and of sending our own journals abroad; in urging, with hearty concert, improvements in the present system of medical education, and a higher standard of preliminary education of those who desire to enter upon the study of medicine; the collection of vital statistics; the collecting of the names of all the regular physicians in the United States, age, place, and date of graduation, if a graduate; also, the same in reference to graduation at literary institutions, if such graduation has taken place.

Meetings.—These shall be held, commencing at 10 A. M., on the day preceding and at the place of the annual meeting of the American Medical Association.

Officers.—President, Vice-President, Permanent Secretary, and Secretary.

The President, Vice-President, and Secretary, shall be elected annually, and shall serve at the meeting of the succeeding year.

Committees shall be appointed where necessary for the carrying out of any of the special purposes of the Association.

The following resolutions were unanimously adopted:

That a committee on foreign exchanges be appointed, to consist of Dr. Parvin, as chairman, and the Permanent Secretary.

That the Permanent Secretary be instructed to correspond with such regular medical journals of the United States as are not now represented, informing them of the objects of the organization, and inviting their coöperation.

That a committee, consisting of Drs. Bowling, Dowell, and Andrews, be appointed on the Registry of Physicians.

That Dr. Halloway be appointed a Committee on Revision.

That the President deliver at the next meeting an address on the history, progress, etc., of Medical Journalism in this country, and that the members of the Association furnish to him such material and information as they may be able to obtain.

That, besides the members already signing the Constitution, all physicians, connected with regular medical journals, be considered members upon signifying, in writing to the Permanent Secretary, their willingness to subscribe to the foregoing articles of agreement, until opportunity be afforded them of signing said articles.

That the President be requested to announce to the American Medical Association the formation and objects of this Association.

That these minutes be furnished to the secular papers, with a request that they be copied.

That Dr. Halloway be appointed a committee to arrange a general plan of commutation between medical journals.

That the Committee on Exchanges be instructed to arrange some general plan for the establishment of agencies in all the principal cities.

A VISIT TO DR. BROWN-SÉQUARD: ORIGINAL DETAILS TOUCHING HIS RECENT RESEARCHES.—The following is from the Paris letter of the *Lancet* for April 24th:

Dr. Brown-Séquard has, with great kindness, related to me his more recent researches, and shown me the interesting little animals upon which he is now experimenting. I have, therefore, the pleasure of being able to speak of them *de visu*, and of adding some interesting details to the note which I sent you two weeks ago. If you remember, I then mentioned that the professor's recent researches were upon some of the effects of section of the sciatic nerve and injury to the corpora restiformia in guinea-pigs. A great number of the animals were shown to me in which the sciatic nerve had been severed, and in all the *zone epileptogène* did exist; I mean one single spot, by exciting which the fit was immediately produced. Pinch wherever you like, independently of that situation, and, though the animal will not like it, and will scream more or less, there is nothing abnormal; but as soon as you excite the particular spot, it goes into a fit. In this situation, which may be easily circumscribed, extending from the ear to the eye, round below the jaw, and backward to the shoulder-blade, there seems to be an obvious impairment of nutrition; the hair is much less abundant, parasitical animals are found there, etc., and, besides, sensibility is considerably diminished. The fits produced are quite similar to those brought on by section of the lateral half of the spinal cord.

Dr. Brown-Séquard showed me some animals in which the paw, of the limb where the sciatic nerve had been divided, was more or less injured. This, he observed, was not a spontaneous injury which must be attributed, as had been thought, to the division of the nerve. The dragging of the paralyzed limb produced a slight abrasion; and as soon as there was a drop of blood, the little animal set to gnawing the insensible extremity. It is also the case with rabbits. There must be, however, a drop of blood to excite the voracity of the animals. In some of them, two of the claws of the feet, the two outer ones, animated by the great sciatic nerve, which alone is severed, had fallen off; while the remaining claw, the middle one, animated by the little sciatic nerve, was unimpaired. By wrapping up the limb in a bag as soon as section of the sciatic nerve is performed, the experimenter prevents any injury occurring.

With regard to his other series of experiments, those in the corpora restiformia, the professor showed me a great number of guinea-pigs in which I could trace the effects of injury to that particular part of the nervous system. The ears of several guinea-pigs showed the appearances of dry gangrene. In some of the animals half of the ears had already fallen. The aspect produced by the solution of continuity along the edge of the ear is quite distinct from that of a bite. In a bite, the little portion of the ear seems cleanly cut off; whereas in dry gangrene it appears to have crumbled off. I have noticed the remains of two or three hæmorrhagic clots which had formed on the ear.

To conclude, I may just mention that Dr. Brown-Séquard was much surprised when some of the French journals stated that he had neglected to note the occasional occurrence of hæmorrhage in the ears of insane people. The fact is, that the very object of the illustrious experimenter, in mentioning the phenomena which he observed in guinea-pigs, was to show that the hæmorrhagic clot observed on the ears of mad patients, and concerning the etiology of which there is still much discussion, may be due to purely internal nervous causes, and not to external violence—his chief aim in every one of his experiments being their application to the pathology and therapeutics of the human species.

The same correspondent makes the following note of the elaborate paper of M. Léon Lefort on the prophylaxis of venereal disease recently presented to the Paris Academy of Medicine. After alluding to the part taken by M. Lefort in the discussions at the International Medical Congress in 1867, he continues:

M. Lefort has since then continued his researches, and has embodied the various documents which he has been able to gather in a memoir, presented to the Academy of Medicine on Tuesday last. During the years 1866 and 1867, M. Lefort was attached to the Lock Hospital of this city, and availed himself of the opportunity for studying the different cases which presented themselves either in the wards or in the out-patient department, from a social and hygienic point of view. Thus, in a total number of 4,987 cases, carefully noted and consisting of the different kinds of venereal disease, M. Lefort examines their etiology as applying to the various classes of women from whom the malady was supposed to have been contracted, and so far as the manifold difficulties and obscurities attending such an investigation would allow. M. Lefort divides the above women into five categories: 1, the legitimate wife or concubine; 2, a mistress or passing acquaintance (*connaissance*); 3, the women who are met with at the public balls; 4, those who are encountered in the thoroughfares; 5, those who reside in certain houses. Each category of women is examined with respect to the number and the kind of cases to which they had given rise; and in connection with each of them there are many interesting remarks or statistics, which I must pass over on account of space. The results of M. Lefort's inquiry plainly show the immense evils of unrestrained prostitution, especially as compared with prostitution when submitted to certain regulations; and he calls for the immediate adoption of every possible measure intended to place prostitution under strict surveillance. Among other figures, the following may be quoted: of 2,303 unfortunates arrested in the streets by the police, and visited annually, one out of three was diseased; whereas, in a total number of 3,850 registered unfortunates, there was only one case of disease out of seven during the same period. In the course of his memoir, the author alludes to the beneficial effects which the working of the Contagious Diseases Act has already produced in England, and expresses a desire that it may be extended to the whole country.

Claude Bernard a Senator.—The Emperor of the French, by a recent decree, has called the celebrated physiologist to the Senate, and he will take his place at the approaching session, with Nélaton the surgeon, and Dumas the chemist. Dr. Conneau, the early friend of the emperor, and his companion at Ham, was made a senator a year ago, but from personal and not scientific reasons. Bernard's appointment was with special reference to the representation of the cause and interest of general science in the Senate, and will give him an opportunity of doing it good service, and furthering its advancement. In his interview with the emperor, he spoke of the way things were done in Germany, and told him that the practical laboratories at Berlin and Bonn had been given three millions of francs by the Prussian Government. Twenty-five years ago Claude Bernard was apothecary's assistant in a provincial town. He went to Paris to study medicine; and mainly by his ability and perseverance he has gained his present scientific position; although he early attracted the notice of both Magendie and Rayer. To the protection of the latter he owed much—within a short time the exceptional honor of being elected a member of the Académie Française, the immortal forty. Besides senator and academician, he is Professor of General Physiology at the Museum, Professor of Experimental Medicine at the Collége de France, Annual President of the Académie de Sciences (l'Institut), Life President of the Société de Biologie, Member of the Academy of Medicine, Commander of the Legion of Honor, etc., etc.

Since the above was written, we have received an account of Claude Bernard's formal reception at the French Academy, which took place on the 28th of May. The large hall of the Palais Mazarin was crowded by the chief literary and scientific celebrities of the day. The Paris correspondent of the London *Lancet* writes:

> Claude Bernard's harangue proved a masterly production from both a scientific and a literary point of view, and was listened to with the deepest attention. It had not, of course, that peculiar success which attends the harangues usually delivered at the *séances de réception* of the French Academy, and which attaches rather to the political allusions and to the covered shafts which are directed against the Government, than to the subject of the discourse. But the great interest of the subjects which the author treated of, the elevated tone of his discourse, and the elegant literary form in which it was presented, created a deep impression, and rendered the whole harangue a very successful one indeed. M. Patin, a distinguished scholar and writer, was the member intrusted with the duty of receiving Claude Bernard, and of responding to the inaugural harangue of the great French physiologist. His discourse being more strictly literary, exhibited more of the spirit to which I have just alluded, and was agreeably sprinkled with anecdotes and witty allusions. According to the invariable custom of the Academy, the harangue of the newly-received associate must be a panegyric of the deceased member whom he has succeeded; while the respondent speaks in eulogistic terms of the new associate, and of the departed one. M. Claude Bernard, therefore, devoted the whole of his discourse to the life and labors of Flourens, and in turn received a large tribute of praise from M. Patin.
>
> Before entering into the consideration of Flourens's merits, M. Claude Bernard warmly thanked the Academy for the honor which it had conferred upon him, and wished to show the alliance between letters and science. This was done in very appropriate terms, and the passage from this portion of his discourse deserves to be transcribed:
>
> "It has been said with justice that Literature is the elder sister of Science. It is the law of the intellectual evolution of nations, which have always produced their poets and their philosophers before forming their *savants.* In this progressive development of humanity, poetry, philosophy, and the sciences express the other phases of our intelligence, passing successively through sentiment, reason, and experience; but, in order that our knowledge may be complete, an inverse elaboration must be accomplished, and experience, tracing facts to their cause, must in turn enlighten our mind, purify our sentiment, and fortify our reason. This proves to us that letters, philosophy, and science must unite in the search after truth."
>
> A little further on, the celebrated *savant* spoke in the following trite terms of the interest which now attaches to physiology, and of the intimate connection of this science with literary and philosophical research:
>
> "Physiology, which explains the phenomena of life, constitutes a sort of intermediate science, taking root in the physical sciences of nature, and

upraising its branches to the philosophical sciences of the mind. It seems, therefore, naturally destined to form a link between the two orders of sciences, having its solid foundation in the former, and giving to the latter the support which is indispensable to them. Thus it is that the rapid and brilliant progress of modern physiology excites a general interest, and attracts more and more the serious attention of philosophers, and of all those who, like you, gentlemen, dwell in the higher regions of thought and mind. It is to this circumstance, doubtless, that I am indebted for having been distinguished by you in the midst of my learned *confrères*."

M. Claude Bernard then reviewed the life and writings of Flourens, and in doing so pointed out the value, and related the conquests, of modern experiment.

Mr. Ernest Hart, recently the editor of the *British Medical Journal*, surgeon at St. Mary's Hospital, London, one of the rising ophthalmologists of England, has, it appears, suddenly thrown up all his appointments, retired from his journal, dismantled his house, and quitted London, thus cutting short a career of much promise. Reasons of entirely a private nature are assigned.

A Well-paid Operation.—Dr. Magni, Professor of Ophthalmology in the University of Bologna, Italy, has gone to Lima, Peru, to operate on a merchant for cataract. Besides the expenses of the journey for himself and assistant, he is to be paid a fee of one hundred thousand francs, about twenty thousand dollars in gold.

A writer in *Scientific Opinion*, in reviewing Pennetier's "*L'Origine de la Vie*," thus states the present position of the question of "spontaneous generation," and its issues:

As Mr. Mill has said, a doctrine must pass through three stages—ridicule, argument, and acceptance. Heterogeny has travelled through the first, and has now fully reached the second, as this volume of M. Pennetier's will fully show. In the twelve or thirteen chapters which the author has given us we find the whole of this great subject treated in its historical, descriptive, and argumentative aspects. The sketch of the history of the subject begins with a period almost as early as that of the Georgics of Virgil, and brings us through the times and experiments of Redi, Buffon, Needham, Spallanzani, Bonnet, O. F. Muller, Lamarck, Cabanis, Dumas, Dujardin, up to Schultze, Ehrenberg, and, lastly, to the year 1847, when M. Pouchet issued his work on the "Positive Theory of Spontaneous Ovulation," and demonstrated the spontaneous origin of the mammalian ovum. In 1859, we are told that the Rouen professor announced that primordial generation, like sexual generation, takes place by means of ova; but that, while in the latter the eggs are formed by the ovary, in the former they are the product of a membrane developed at the surface of infusions. It is this doctrine which the author, M. Pouchet, as well as several other distinguished *savants*, has since endeavored to enforce by fact and argument. The concluding portions of the chapter on the History of Spontaneous Generation gives reference to the various investigations and experiments which were brought before the French Academy during the last eight or nine years, and which have been the occasion of so many conflicts between the champions and the enemies of the doctrine, and contains the following hopeful expression of belief on the part of the author:

"In summing up, we may say that heterogeny, systematically repelled by four or five influential members of the Academy of Science, has nevertheless numerous warm supporters, even in the *Institut*, who, though they have been condemned as dreamers, have appealed to the public, and have been listened to with attention. The conception of Bonnet and Spallanzani (the universal distribution of germs) has been consigned to the hypothesis of antiquity, even by those who had proclaimed it as a proven truth. Limited panspermy, destined soon to follow it, has only one supporter; and the doctrine of spontaneous generation, acknowledged in France, Germany, Italy, England, and America, is defended and demonstrated by Pouchet, Joly, Musset, Mantegazza, Castoldi, Owen, Wyman, and many others."

It may be as well to state, for the benefit of those of our readers who have not gone into this question, what the doctrine of heterogeny involves, and on what arguments it is based. If we lay aside an infusion of organic matter (of hay, for example), we find in the course of a few days that a pellicle or scum forms on the surface, and that in this there are developed multitudes of low forms of life, such as bacteria, vibriones, etc. The philosopher asks, Whence come these? and to this question he receives two replies. The panspermists say the atmosphere is charged with the germs of organized beings, and when these fall into certain infusions they find there the conditions necessary to their existence, and they are then developed. That is the orthodox view. On the other hand, M. Pouchet's followers, the leaders of the heterogeny school, assert (1) that the air does not contain these germs, and (2) that the new organisms are developed from the molecules of the decomposing organic matter, or, in other words, are formed by *spontaneous generation*. This is the heterodox opinion, the truth of which M. Pennetier tries to demonstrate. In order to support the theory of heterogeny, then, one of two things is required: (1) It is necessary to prove that the air does not contain these myriads of germs, or (2) that when the air has been so acted on as to destroy the vitality of these supposed germs, generation of animal or vegetable forms takes place.

ABOUT CILIA.—One of the most curious facts in connection with the subject is, that the activity of the cilia does not immediately cease on the extinction of the life of the animal on which they are found, for their motion has been observed in the tortoise for fifteen days after death, when putrefaction was far advanced, and in the frog for four or five days. The cause of their motion has long been a debatable point among naturalists; but, as the motion is found after systematic death, it is thought to be connected with the contractile substance of which muscles are composed. If it does not depend upon this substance, it has been argued, it must be caused by some substance of the nature of which we know nothing, and of the very existence of which we have no proof, for our most powerful microscopes have as yet been unable to discover the motor power of these interesting processes.—*Hardwick's Science-Gossip.*

"HEMLOCK NO POISON."—One of those paragraphs so common in newspapers, and so productive of harm, has been started on its dangerous career by the *Pall Mall Gazette.* It is stated that not only is hemlock no poison, but that it has no remedial value; and further, Dr. John Harley is alleged to be responsible for the latter utterly unfounded assertion. This is really too bad. Undoubtedly Dr. Harley's valuable researches have shown that the poisonous effects of *conium* are far from being as intense as they are generally represented. But if his labors have done any thing to benefit medicine in this direction it is in showing that in the juice of conium we have a remedy for a disease—chorea, or St. Vitus's dance (see the *Practitioner*, September, 1868), which has hitherto baffled every effort of the physician.

CURE OF CAROTID ANEURISM BY DIGITAL COMPRESSION.—A case of aneurism of the primitive carotid, successfully treated by intermittent digital compression of the arterial trunk, has been reported by M. Rouge, of Lausanne, to the Society of Surgery of Paris. The patient was sixty-eight years of age, and a male. The compression was effected laterally, the thumb being placed against the anterior edge of the sterno-mastoid, the next three fingers under the posterior edge, and the artery being thus seized and compressed between them. Thus the pressure on the pneumogastric, which occurs when the carotid is compressed from the front against the sixth vertebra, and which is so painful, if continued, as to be the main cause of failure, was avoided. Digital compression was continued for seventeen days, for an average of seven or eight hours each day. Cases already on record, on which this treatment has been tried, are, Gioppi, 1858 (*Annales d'Oculistiques*, 1858, fifth part), Vanzeth, 1858 (*Archives Générales*, 1858), both successful; Delore, 1860 (*Gazette des Hôpitaux*), Ernest Hart, 1861 (*Lancet*); Scheppard, 1863 (*Gazette Hebdomadaire*, February 19, 1864), successful.—*British Medical Journal.*

THE SECRETION OF MILK IN INFANTS.—Dr. V. Havard, of the Infants' Hospital, Ward's Island, sends us the following note:

One of the nurses in charge of the bottle-fed wards, a reliable person, who has been several years in this institution, assured me that during the last eighteen months she saw at least forty babies from whose breasts milk was expressed. Perhaps some percentage might be arrived at by stating that the number of infants under her charge varied from fifteen to forty. She speaks of it as being by no means unusual, and every time that she strips a newly-arrived foundling the breasts are duly inspected. She mentions the case of an infant three weeks old, whose breasts had to be lanced from not having been milked in time. As might be supposed, milk is more commonly found in girls than in boys' mammary glands. Of the three cases that came lately under my notice, the first one was a girl aged five days; the second a boy aged twelve days; both had their mammary glands slightly prominent; they yielded a few drops of milk. The last one deserves more attention. John L. was admitted on March 13th, in a fair condition, aged eight days. The breasts were found much enlarged at the base, and prominent, forming a soft, flabby tumor, covering a space about as large as the palm of an adult hand, while the centre was firmer, and elevated so as to be equal in size to a pigeon's egg. They were gently squeezed, and the milk oozing out dribbled down the chest to the amount of half a teaspoonful from each gland. The child lived fifteen days, and every day they yielded about the same amount.

The milk was slightly alkaline, as human milk usually is. The microscope showed a large number of globules, but they were poorly elaborated, the majority of them being of diminutive size, some scarcely perceptible; and there could be seen a great many granules held together in masses. About one globule in ten was of good size. In short, I should call such milk passable, in a wet nurse, although it has some of the characteristics of colostrum. This child died of gastro-intestinal catarrh.

Poisoned Beer.—Here is the opinion of the London *Scientific Review* on beer as furnished to the London market. Beer-drinkers would do well to notice and take warning: "About five hundred persons die annually of delirium tremens in England alone, while a much larger number are attacked by the disease. Our most distinguished medical writers agree that about one-third of the insanity in Great Britain may, with certainty, be ascribed to drinking, and we all know that the children of drunkards are very frequently idiotic. Quite recently, out of three hundred idiots in Massachusetts, one hundred and forty-five, or nearly half, were found to be the children of habitual drunkards. All these terrible effects are of course heightened considerably by the habitual use of poisoned beverages. In theory, every kind of beer can be produced by use of malt and hops alone; no other ingredients are required when the process of brewing is conducted by honest and clever men. But in reality what an endless list of injurious compounds have we not detected in the various beers, porters, and ales recently submitted to our investigations!—cream of tartar, alum, green vitriol, small quantities of copper, sometimes lead, picric acid, cocculus indicus, grains of paradise, coloring matters of various descriptions, quassia-wood, and other cheaper and more hurtful bitters, together with the harmless, but still needless compounds, liquorice, molasses, coriander, capsicum, caraway-seeds, ginger, salt, malted horsebeans, etc. To this list, already far too long, we might still add the names of three plants, *Ledum palustre*, *Myrica gale*, *Datura stramonium*, occasionally used to adulterate beer both at home and abroad."

Dr. Edwin M. Snow, the health officer of Providence, R. I., concludes his report for the month of May, 1869, with the following comment:

There were two murders in the month of May, which are only counted in the above table as one death, under the head of *criminal abortion*. The victims were a young healthy married woman and her unborn child. From some foolish reason, at any rate with no good and sufficient reason, she consented to do violence to the laws of her being, to prevent the high object of the marriage relation, and to become accessory to the murder of her own offspring. In so doing she lost her own life. It would be well if her death might be a warning to others, and if all would remember that this crime can never be done with safety. It is always murder of one human being; there is always possible danger to the life of the mother; there is always certain injury to her health and happiness.

The murderer in this case received twenty-five dollars for his services in killing two human beings. He assured the deluded woman that there was no danger, but exacted from her a solemn promise that "whatever might happen, she would not tell any one of his crime." He is called "doctor," and walks the streets of a neighboring town unmolested, and is daily associating with respectable men and women, and yet he makes the deliberate murder of human beings a part of his business. Human justice is fallible, and may not overtake him in this case; but knowing that there is a righteous God who has expressly said, "Thou shalt not kill," we cannot doubt that this man will some time receive the punishment due to his deliberate and oft-repeated murders.

WE have received from Dr. L. J. Frazee, Dean of the Kentucky School of Medicine, a printed copy of the following resolutions:

LOUISVILLE, KY., *May* 20, 1869.

At a meeting of the Faculty of this School, May 13th, the following preamble and resolution were unanimously adopted:

Whereas, The medical colleges of the United States have, hitherto, in vain sought for an expression of the wish of the American Medical Profession in regard to the amount of fees proper for a single official course of collegiate lectures; and

Whereas, The American Medical Association did, by a vote conspicuously unanimous, decide on the 6th of May, 1869, that $120 should be accepted as the *minimum* amount to be charged for such a course of lectures; and

Whereas, This vote is morally and honorably binding upon all who personally or by delegated authority entered into it; and

Whereas, The Faculty of the Kentucky School of Medicine, in common with all reputable members of the medical profession, accepts the decisions of the American Medical Association as representing, through its delegated organizations, the sentiment and desire of the great body of American physicians;

Be it hereby resolved, That the Faculty of the Kentucky School of Medicine acknowledges this officially expressed wish of the Association as its guide in this relation, and that it will hereafter charge $120 for each official course of its collegiate lectures. L. J. FRAZEE, M. D., *Dean*.

A NEW MEDICAL JOURNAL.—James Campbell, 18 Tremont Street, Boston, announces, to appear July 1st, a new periodical, to be styled THE JOURNAL OF THE GYNÆCOLOGICAL SOCIETY OF BOSTON. It will be published monthly, each number to contain not less than sixty-four octavo pages.

The editorial staff consists of the officers of the Society, Drs. Winslow Lewis, H. R. Storer, and George H. Bixby.

The subscription price is fixed at $3.00 per annum.

POPULAR IGNORANCE OF THE PROPER WELFARE AND TREATMENT OF THE INSANE.—However complete in its appointments or thorough in its organization an institution may be, or however conscientiously its affairs may be administered, so great is the prejudice existing, from false education and ignorance, respecting every thing that pertains to the true welfare and treatment of the insane, that it is subject to constant criticism, suspicion, and distrust. It may not, therefore, be out of place to explain, by some illustrations, the causes and sources of such a prejudice, so easily explainable by any one whose official position has given him the opportunity of observing the motives and springs of human action under circumstances that disclose them in almost every variety of aspect.

The public generally, and even the intelligent and educated, constantly confound the modern hospital with the ancient mad-house. It is no unusual thing, even at this day, to be asked if the patients can be seen who are in the "cells," and if we are not obliged to "chain the worst cases." We are not always confident that our assurance, that cells and chains have long since been abandoned as unnecessary and cruel means of restraint, receives full credence. The great majority who visit the asylum seem particularly anxious to see those who are most insane. They are not satisfied to see or be informed of the general means of treatment, but want to be shown "the worst cases, the real raving crazy ones." They do not seem to reflect that the patients are sick people, or that if these unfortunates were their own fathers, mothers, wives, husbands, brothers or sisters, they would be very reluctant to make them objects of common curiosity. When people are stricken in their own households they for the first time realize the importance of shielding their afflicted ones from the idle gaze of the curious. Why should patients not be as sacredly guarded in a hospital as in their own houses? Who would think of intruding upon the privacy of families, when in affliction, uninvited, to see if the physician was discharging his duties, or to listen to the cries or delirium of the sick? Many do not know, and others do not consider, that the public exhibition to visitors indiscriminately, constituted one of the most repulsive features of the old system of treatment, and one of the most productive causes of the very manifestations they are so anxious to witness.

Such a course would not only be a return to ancient usages, but one which would be in direct conflict with the healing aim which prescribes the utmost rest and quietude. Even the visits of friends, though often pleasurable to the patient, are frequently so exciting as to undo in an hour all that has been accomplished for weeks or even months. Nevertheless our motives for advising against the visits of friends, to cases likely to be injured thereby, are constantly impugned, not only by those whose best interest we are striving to promote, but by the community at large. Undoubtedly one of the reasons why the public are slow to yield their belief in the use of chains, fetters, and cells, and in the existence of constant maniacal raving, arises from the fact that, outside of the asylum the insane are often both chained, manacled, beaten, and otherwise abused, and sometimes suffered to go unfed and naked for days.

In illustration of this point, we quote from another portion of Dr. Gray's Report the following statement regarding the manner in which patients were brought to the hospital. Out of the 382, the whole number received during the year—Twenty-four patients were brought in irons. In addition, one had his arms tied behind his back, his legs were bruised, and one tooth knocked out. Another, with hands manacled behind his back, had his arms tied with cords and his feet with ropes, and had been without food for two days. His hands and limbs were swollen, and he was so weak that he was immediately placed in bed, which he kept for some days. One, whose wrists were badly cut by irons, had been chained to the floor at home. Another, who was ironed hand and foot, had his arms tied behind his back, and was without shirt, shoes, or stockings. Another, who was ironed, had his elbows pinioned and wrists severely bruised and swollen. Three more, handcuffed, were also pinioned; and another, besides all this, had his feet tied in a sack. One patient had inflicted seventeen wounds upon his person with an axe. Five of these were upon his head, and one had penetrated the outer table of the skull, portions of which were afterward removed. He declared the devil had possession of him, that he was held responsible for the public debt, that all the real estate in the country, his own included, was held by the government; again that the house and all the world were on fire, when his cries of alarm and supplications for help aroused his neighborhood. He made frequent attempts on the lives of his wife and son, and most persistent efforts to starve himself. When brought to the asylum he was extremely feeble and emaciated, and could make but slight resistance to taking nourishment. Food was given cautiously but regularly. He soon rallied, and in nine months was discharged recovered. Another case of melancholia, of six months' duration, was received, in which the patient had, just before coming here, cut off her left hand under the delusion that by this means alone she could be saved. Her delusion also extended to plucking out her right eye, but, owing to watchfulness exercised, she was not able to carry out her design. In seven months she recovered, and then regretted she had not been brought to the asylum before she had thus maimed herself for life.

All this treatment, as a general thing, is from ignorance and fear, and by no means the offspring of indifference and wanton abuse. This element of fear of the insane is so great, that often four or five persons will accompany a patient to the asylum, in addition to having him bound or fettered. The insane person is often quick to recognize the fact that he inspires this fear, which tends to make him more unmanageable. A large proportion of these very cases, when taken upon the ward and frankly told they are insane, and that their conduct is evidence of it, become quiet and manageable.—*From Annual Report, Dr. John P. Gray, Superintendent State Lunatic Asylum, Utica, N. Y.*

BITES OF INSECTS.—It would be well, says the *Journal of Cutaneous Medicine*, if we could follow some of our tormentors of the insect world through their daily life and discover their loves and their hates. Linnæus informs us that the seeds of the *Absinthium maritimum* are deadly to the flea, and we have likewise heard that the odor of the elder is equally obnoxious to other insects. It is said by the devotees of botany that on a hot summer's day the cattle may be seen to cluster round the elder for protection against the sting of flies; we have thought sometimes in our summer rambles that the verdict of the wise was unproven. We entertain, however, a strong belief that the perfume of the camomile is destructive of the *Acarus scabiei*, and we use it accordingly in our pomades for the treatment of scabies. Bazin was wont to recommend for the same purpose an unguentum anthemidis; and our Italian contemporary, the *Giornale Italiano delle Malattie della Pelle*, reminds us that an infusion of camomile-flowers has been recommended as a wash to the skin, for the purpose of protection against gnats. Gnats are said to shun the traitorous perfume; and if such be the case, it would be easy to convert the essential oil of the anthemis into an agreeable lotion like that of lavender-water or eau de Cologne.

WEIGHT OF THE BRAIN.—At a meeting of the Vienna Society for Psychiatria and Forensic Psychology, prosector Dr. Meynert gave some statistics on the weight of the brain. His deductions from the weight of 351 brains, as well as those of Parchappe from 284, prove that the influence of psychoses is much greater than age on the weight of this organ. For example, during the physiologically blooming age of the brain's weight (thirty to forty years in males), a mean of only 1,317 grammes was given, because brains of the later stages of psychoses were mingled with the others weighed; on the other hand, in the primary stage of psychoses, without regard to age, a mean of 1,329 grammes was given for conditions of depression and 1,359 for mania. Furthermore, the reduction of weight was always equal to the duration of the disease. It was also found to depend upon the intensity of the latter, as paralytic idiocy was characterized by a great reduction of weight. Meynert also found that insane brains had more cerebellum, proportionally, than sane; and that insane females had more than insane males.—*Medical Press and Circular.*

EXTRACT FROM THE REPORT OF THE TRUSTEES OF THE CITY HOSPITAL, BOSTON.—The following is a statement of the number of patients treated during the past year: Patients in hospital, January 1, 1868, 141. Admitted, medical, 1,133; surgical, 880; ophthalmic, 61; small-pox, 4. Total, 2,219. Discharged, 1,875; died, 163; remaining, 181. Largest number of patients in hospital at any one time, 230; smallest number of patients in hospital at any one time, 137; daily average number of patients in hospital, 172. Medical out-patients, 3,851; surgical out-patients, 2,732; ophthalmic out-patients, 1,652; cutaneous out-patients, 559. Total, 8,794. Number of visits of out-patients: medical, 9,672; surgical, 5,460; ophthalmic, 13,104; cutaneous, 1,520. Total, 29,756. By reference to the report of the superintendent, it will be seen that, although the number of patients treated has increased 33 per cent. for the year, the proportion of deaths is lower than ever before in the history of the hospital, being 7 3-10ths per cent. This fact, considering the number of severe cases treated, is very gratifying, and is a strong proof of the skill and fidelity of the board of physicians and surgeons.—*Medical and Surgical Journal.*

At a meeting of the Obstetrical Society of London, March 3, 1869, Dr. Brunton read a paper on Twin Pregnancies, detailing seventeen cases of twins observed in his own practice, and nine cases obtained from friends. Of these cases, sixteen had children of the same sex (males or females), with two amniotic sacs. Nine had children of opposite sexes (a male and a female) in one sac; and in one case there were two sacs, and one male and one female child. The conclusion at which he arrived was that, if a male ovum came down from each ovary at one and the same time, conception taking place, we had here an explanation of the existence of twin males, and so for female ova. But if two ova came down from the same ovary, conception taking place, we had twins of opposite sexes (male and female), and this pointed to the function of the ovary—viz., that probably the ova cast off from each ovarium are alternately male and female—in other words, each ovary casts off at one and the same time a male, or each a female ovum. In no case were the twins of the same sex in one bag of membranes.

Dr. Playfair remarked that Dr. Brunton had overlooked the cases of conjoined twins, which were never of different sexes, and yet must have had but one sac.

Dr. Brunton replied that he could not see that this fact disproved his theory. His observations were of natural cases. Moreover, in the cases of conjoined twin-monsters, there might have been a coalescence of the ova (male or female) from each ovary, producing a double monster of the same sex.—*Medical Times and Gazette.*

Trousseau.—We extract a passage from a eulogium on Trousseau delivered before the *Société de Thérapeutique* by M. Pidoux. After describing him as, under the inspiration of Bretonneau of Tours, whose pupil he was, the restorer in France of faith in the power of medicinal agents, well nigh extinguished by the influence of Broussaism, M. Pidoux says: "Strange was it to witness the interested curiosity of the pupils, and still more of the practitioners of mature age, under whose eyes Trousseau gave himself up with imperturbable confidence to the employment of those medicinal agents so redoubted by practitioners of a generation brought up in the fear of irritants. He seemed to them as if manipulating burning coals. Those who had seen him prescribing insoluble preparations of iron, combined with quinine and aloes, to chlorotic subjects suffering from acute gastralgia, palpitating heart, vibrating arteries, and a congested and dysmenorrhœic uterus, were sure next day to be found surrounding the poor girl's bedside, anxious concerning the gastritis, the cardio-arteritis, or metritis, which were sure to be exasperated by the incendiary medicines which had been administered. And when, under the influence of this tonic and stimulating medication, they found a return of appetite for nutritious food, an assuagement of gastric pains, relief to the cardiac and arterial spasm, while the regenerated blood-globules were penetrating the colorless lips and cheeks, they were not only surprised, but felt themselves also relieved. Their faith in the agents of the materia medica was restored, and through these effects of medicinal agents they began to conceive other ideas of disease. I do assure you, gentlemen, that this was quite as interesting as therapeutical experiments on healthy animals." M. Pidoux adds that the effect produced was all the more remarkable because the chlorosis of those days was so much better characterized than in our own. It was both more frequent and more decided than at the present time, owing to the debilitating regimen and therapeutics which were then in fashion.—*Med. Times and Gazette*, 1869.

The British Medical Journal gives the following obituary notice of the late Dr. Maurice Henry Collis, of Dublin. Mr. Collis began his profession as an apprentice to his uncle, the late Dr. Maurice Collis, at the Meath Hospital; and, after having obtained, in 1847, his surgical and medical qualifications, he studied in Paris for above a year. On his return to Dublin, he was appointed Demonstrator in the School of the Royal College of Surgeons, and this office he continued to hold until he was elected Surgeon to the Meath Hospital, in 1851, on the retirement of his uncle. He has been for the past two years Examiner in Surgery in his College, and filled a few years ago a similar post in the Queen's University. His industry was very great, as the records of the Surgical Society and of the annual meetings of our Association will testify. The work, to the preparation of which he had devoted many years, and which will remain as a standard treatise, namely, "The Diagnosis and Treatment of Cancer and Tumors analogous thereto," was published in 1864. His paper on Diseases of the Upper Jaw, Cleft Palate, and Vesico-vaginal Fistula, had gained him a most extended reputation.

ERRATUM.—In Dr. Cardner's article, May number of the JOURNAL, page 132, last line, the figure 1, referring to foot-note, should have been placed after the word "*One*" instead of after "*termination.*"

NEW YORK

MEDICAL JOURNAL:

A MONTHLY RECORD OF

MEDICINE AND THE COLLATERAL SCIENCES.

Vol. IX.] AUGUST, 1869. [No. 5.

Original Communications.

Art. I.—*On External Perineal Urethrotomy, or an Improved Method of External Division of the Urethra in perinæo, for the Relief of Obstinate Stricture; with Remarks on the Preparatory- and After-treatment.*[1] By J. W. S. Gouley, M. D., Professor of Clinical Surgery and of Genito-Urinary Diseases in the University of New York, Surgeon to Bellevue Hospital, etc.

I desire to call the attention of the profession to a safe and simple mode of external division of the urethra in perinæo, for the relief of obstinate stricture, and also to make some remarks on the preparatory- and after-treatment.

I have named this method External Perineal Urethrotomy, to approach exact definition, which is not obtained by the terms boutonnière, perineal section, external urethrotomy, or perineal urethrotomy, all of which fail to designate with precision what is done.

The boutonnière (button-hole) might mean, and sometimes did mean, a small incision involving only the skin, in perinæo or along any part of the course of the urethra, or a similar incision including the canal itself. "Perineal section" does not imply division of the urethra, any more than does the boutonnière. "External urethrotomy" is applied by Mr.

---

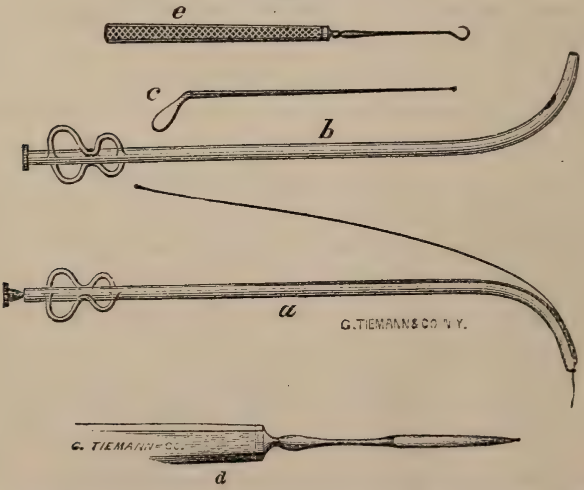
[1] A portion of this paper was read before the State Medical Society at Albany, N. Y., February, 1869.

Syme to external division of the urethra in front of the scrotum, as well as in perinæo. Civiale's "perineal urethrotomy" might as well be interpreted to mean *internal* urethrotomy in the perineal portion of the urethra. But *external perineal urethrotomy* means precisely division of the urethra from without inward in perinæo.

The old method of perineal section is well known to be uncertain, and to be often attended with great difficulty and danger, even with Mr. Arnott's improvement. Mr. Syme's operation is, I believe, equally uncertain, and, with his inflexible guide-staff, the surgeon cannot be absolutely certain that the instrument has not entered a false passage. This accident has occurred in the hands of surgeons experienced in this department—on one occasion in my presence, and an autopsy proved that, the staff having deviated from the proper channel, the stricture had not been divided.

After numerous trials of the various modes of external urethrotomy, and after a careful analysis of their defects and dangers, I have sought to devise a method by which the

Fig. 1.



a. Catheter staff, showing the conductor in the terminal canal, and the stylet a little withdrawn.
b. Catheter staff, with eye on the concave side.
c. Small grooved silver probe, with a broad handle, which can be bent to any angle.
d. Beaked bistoury—natural size.
e. Small hook, for catching the loop of silk.

risk might be reduced to a minimum, and the steps of the operation rendered easy, safe, and certain.

It is the result of this endeavor which I now wish to submit to the profession.

The operation is as follows: the perinæum having been shaved, the patient is etherized. The urethra is explored with a flexible bulbous bougie, of proper size, to ascertain the exact seat of the obstruction. The canal is then filled with olive-oil, and the capillary probe-pointed whalebone bougie (Fig. 1, *a*) is introduced into the urethra. If its point becomes engaged in a lacuna, it is withdrawn a little, and again carried onward with a rotary movement. If it enters a false passage, it is retained *in situ* by the left hand, while another is passed by its side. If this second guide makes its way into the false passage, it is to be treated precisely as was the first, and the operation repeated till one guide can be made to pass the obstruction and enter the bladder. Sometimes five or six guides are thus caught before the false passage is filled up and the natural route opened. I have frequently succeeded in thus reaching the bladder in very narrow strictures, supposed to have been impassable, and after all other means had failed. As soon as a guide enters the bladder—which may be known by the ease with which the instrument may be moved in and out—the other guides are withdrawn. The next step is to introduce a No. 8 grooved metallic catheter (Fig. 1, *b*), with a quarter of an inch of its extremity bridged over so as to convert the groove into a canal, the bridged portion itself being also grooved. Its introduction is accomplished by passing through the canal the free end of the retained guide, then holding the latter steadily between the thumb and index finger of the left hand, and pushing the catheter-staff gently into the urethra, until its point comes in contact with the face of the stricture. The staff and guide are then kept in position by an assistant, who at the same time supports the scrotum. The patient is placed in the lithotomy position, and held by two assistants, or better, by the aid of Pritchard's anklets and wristlets.

The surgeon, seated on a low chair, first makes a digital exploration per rectum, to ascertain, as far as practicable, the condition of the membranous and prostatic divisions of the urethra; then he makes a free incision, in the median line of the perinæum, extending from the base of the scrotum to within half an inch of the margin of the anus, involving only the skin and superficial fascia. The external incision, usually recommended in this operation, is from one inch to one inch and a half in length, but I believe that free external incisions here, as in lithotomy, are of decided advantage, as they expose fairly to view the subjacent parts, and tend to prevent subsequent infiltration of urine in the superficial layers. A few well-directed cuts having brought into view the urethra, the operator, with his finger-nail, feels for the groove on the bridged portion of the staff, and opens the canal upon this groove, longitudinally in the median line, exposing to sight the instrument. A loop of silk is then passed through each edge of the incised urethra, close to the face of the stricture, and held by the assistant in charge of the corresponding limb. This excellent contrivance, suggested and employed many years ago by Mr. Avery, of Charing Cross Hospital, London, is of the greatest service, and ought not to be omitted, as it constantly keeps in view the median line. When the urethra is opened, and the loops are secured, the catheter is withdrawn a little, so as to bring into view the black guide; then the stricture, with about half an inch of the uncontracted canal behind it, is divided. This, I think, is best accomplished by means of the small knife (Fig. 1, *d*), which I have modified from Weber's instrument for slitting the canaliculus lachrymalis. It is a very narrow, beaked, straight bistoury, about the size of a small probe, and is made to enter the stricture alongside of the guide, as if it were a probe, and the incision is done by directing the edge downward. The last step is to pass the catheter-staff, guided by the whalebone bougie, into the bladder; but, should it be arrested in its course, the knife must be reintroduced, and the incision extended farther back. The operation is thus completed without unnecessary delay, the bladder is entered with the greatest gentleness; and, by the free flow of urine through the catheter, the surgeon is certain that the instrument has gone in the right direction, that he has divided the stricture thoroughly, and that he has not simply enlarged a false passage.

This method is, I think, particularly well adapted to cases where the urethra is deep-seated, or where there is great induration or tumefaction of the perinæum, from old standing trouble, or from extravasation of urine. The presence, in the bladder, of the whalebone guide, so firm though so delicate; the assured position of the catheter-staff, compelled to follow the guide which lies in its terminal canal; the light thrown into the wound through the agency of the loops of silk, which constantly indicate the situation of the urethra, and of the median line; the ease and certainty with which the catheter-staff—still sliding over the guide—is made to enter the bladder after the incision; all seem to me to contribute to the success of the operation, in difficult cases especially, more than any other means which I have employed. Where the initial introduction of the whalebone guide is impossible, it may be passed through the perineal wound into the bladder, and the stricture divided as before; or Arnott's grooved probe may be used as a guide for the incision, and the whalebone bougie then passed along its groove. In either case, with the guide in the bladder after the incision, the point of the catheter-staff may be protruded from the wound, the free end of the guide carried through the terminal canal, and the bladder entered as before described.

When the state of the patient is such that the operation may be safely postponed, which can almost always be done when there is not impassable stricture with retention or extravasation of urine, I am in the habit of adopting, for a week or so, the following course of preparatory treatment:

The patient is confined, as far as possible, to the recumbent posture, and is directed to take a warm hip-bath every night. A diluent drink is to be freely used, ten drops of the tincture of chloride of iron taken three times daily, and five grains of quinine at bed-time. A suppository, containing one grain of the aqueous extract of opium, and half a grain of the extract of belladonna, is introduced into the rectum every night to allay spasm and procure sleep. Finally, the bowels are emptied, by the aid of a dose of oil, the evening before the operation. On the morning of the operation, an enema is given to completely free the rectum from fæces.

After the operation is concluded, and before the patient has fairly recovered from the effects of the anæsthesia, ten grains of quinine, with a quarter of a grain of morphia, are administered; and as soon as the nausea produced by the anæsthetic has subsided, a broth is given. On the following day, the diluent and iron are resumed, with the addition of three grains of quinine three times daily, and continued for two or three weeks. After four or five days, a warm hip-bath should be taken daily.

I believe that such a course of treatment is likely to prevent the occurrence of many of the unpleasant symptoms which sometimes follow the operation. The surgical after-treatment is at first similar to that observed in lithotomy. The scrotum is supported by a suspensory bandage, to guard against any possibility of infiltration of urine into its connective tissue, and the patient is kept on his back. Generally, the first time he urinates, most of the urine flows through the perineal wound; but afterward, for forty-eight hours, all the urine escapes through the proper channel, from swelling and contact of the lips of the wound; as soon as the swelling subsides, and suppuration is established, a certain quantity of urine again passes through the perineal wound, but no harm ensues.

In the great majority of my operations, both of internal and of external urethrotomy, I have not followed the usual practice of tying in a catheter, for reasons which I shall presently state.

The wound is not disturbed, and no instrument is passed into the bladder until the second day, and then a full-sized, highly-polished, conical steel sound, of proper curve, is introduced, and the introduction repeated every third day, until the wound has healed—which takes place generally within four weeks—and then the patient is taught to pass the instrument for himself, and is advised to continue its use indefinitely.

As the retention of a catheter, for a longer or shorter time after this operation, has been and is still strenuously insisted upon by many surgeons, I will state, briefly, the facts which at first convinced me of its uselessness, and finally of its occasional danger:

F. B. (case 1 in the table) came to me, in the latter part of 1860, with threatened retention of urine, from impassable stricture of the urethra. His condition was such, that I determined to give him the benefit of the external section, which was done without the aid of any staff or guide. An impassable stricture, in the pendulous portion of the urethra, rendered impossible the passage of a catheter to be retained *in situ*. As I had never known bad results to occur from the contact of the urine with the freshly-incised surface after the operation of lithotomy, I concluded not to retain the catheter with which I had withdrawn the urine through the perineal wound, notwithstanding the warnings of Mr. Syme, and of other good authorities, that such a procedure is dangerous. I preferred to allow the urine free flow through the artificial opening, without the aid of any catheter or canula. No urethral fever, nor indeed any untoward symptom ensued, and the perineal wound cicatrized in six weeks.

McW. (case 20 in table) applied for relief in June, 1861. He was at that time suffering from retention of urine, consequent upon stricture of the urethra. His bladder was distended to such a degree as to reach the level of the umbilicus, and various means had been tried for its relief, but in vain. He was at once subjected to the external division, without guide, in order to ward off extravasation and its consequences. A No. 12 silver catheter was then introduced into his bladder, and tied in position, but, two hours afterward, I was called to see the patient, and found that he had pulled it out. I endeavored to reintroduce the instrument, but the man became so unruly that I abandoned the idea, and left him to pass his urine through the wound. No urethral fever, nor any other bad symptom followed; and he made an excellent and rapid recovery. In about four weeks the wound was healed.

The following case shows some of the ill effects of the prolonged retention of the catheter:

A. F., sailor (case 4 in table) was sent to me for operation, by my friend Professor Van Buren, in April, 1864. He was then suffering from impassable stricture, the result of gonorrhœa. He had previously resorted to a hospital in one of our sister cities for treatment, and in May, 1860, perineal section was performed upon him for impassable stricture five and a half inches down. The patient remained in the hospital four months after the operation, wearing a flexible instrument during the whole period, with the exception of the last month, when the catheter was only retained at night. The perineal wound did not heal till the end of the third month. When he left the hospital, he had learned to pass for himself a No. 12 flexible bougie, but in the course of a few months the instrument became so much worn that he was forced to cease its use, and, being at sea, he could not procure a new one. The stricture soon began to recontract, and symptoms of cystitis appeared. When I first saw him in April, 1864, his urethra was found thickened, and No. ½ bougie could not be introduced.

On June 11, 1864, I performed upon him perineal urethrotomy without the previous introduction of a guide, as I could get none through; but, after having incised the urethra, I succeeded in passing through the obstruction a very slender grooved probe, such as that recommended by Mr. Arnott, and, thus guided, I was able to divide the stricture freely.

By request, and contrary to my own convictions, I introduced, and tied in position, a No. 12 silver catheter, which was allowed to remain undisturbed for forty-eight hours. On the third day the patient developed urethral fever, and on the fourth he had a retention of urine, with aggravation of his cystitis, induced, as I believe, by the presence of the catheter. He finally made a good recovery, and returned to his occupation, having learned to introduce for himself a highly-polished No. 17 conical steel sound.

Judging from the high reputation of his surgeon, I inferred that the operation, which had been performed in May, 1860, was properly done, and assumed that the stricture had been thoroughly divided, but the after-treatment was not beyond criticism. An elastic catheter was introduced, and retained in position, and when withdrawn it was found thickly incrusted with the salts of the urine. Could such a foreign body remain so long in the urethra and bladder without creating much irritation, and could it fail to prove otherwise than injurious? Still the wound healed, in spite of this interference, at the end of the third month. The irritation kept up by that foreign body would not have arisen had he been left to pass his urine through the perineal wound, as are nearly all patients, in our days, after lithotomy.

The alleged reasons for tying a catheter *in situ* to be worn until the wound has healed are, first, to prevent the urine from coming in contact with the recently-cut surface; and second, to hasten union, by still endeavoring to prevent the urine from passing through the granulating wound.

That a catheter tied in position does not prevent the urine from escaping between it and the urethral walls, however large the instrument may be, has long since been demonstrated, and there are few surgeons of experience who have not verified this fact. That the presence of the catheter does not hasten, but, on the contrary, does retard the progress of union of the perineal wound, is well illustrated by the case which is the subject of these comments. Other illustrative cases are not wanting in the records of hospitals.

I believe that the presence of the catheter, in the case just referred to, was among the most prominent causes of the recurrence of the stricture, and I do not see why the chronic urethritis thus induced should not have acted as that which had originally given rise to the stricture.

The following case is an instance of severe recurring chills occasioned by the retention of the catheter:

W. S. (case 12 in table) fell with one leg down a hatchway, striking his perinæum against its raised edge, but without a great degree of force, on the 22d of February, 1865. He was immediately conscious of bleeding from the urethra, and lost, in a pretty continuous flow, about a gill of blood. He refrained, through fear of pain, from attempting to pass water for about fourteen hours, and then, failing in the attempt, a catheter was introduced, but no urine flowed—apparently from clogging of the eyes of the instrument by coagulated blood. Half an hour afterward, while lying in his bunk, a few drops of urine escaped involuntarily, but on rising and making an effort, the stream ceased; when he fell asleep shortly afterward, his bladder relieved itself spontaneously, and for the two days ensuing he passed a pretty full stream, but on the third day contraction commenced, and in two weeks he again had retention, but no instruments could be passed, although attempted daily for two months, his urine being passed meanwhile with great pain, much straining, and only in drops.

In this condition he was subjected to perineal section, by one of my colleagues, on the 19th of August following, and a No. 8 silver catheter retained in the bladder. Severe chills recurring daily, the catheter was removed on the fourth day, and it could not afterward be introduced; but the chills ceased, and the patient was able to pass his water partly through the urethra, and partly through the perineal wound. As the latter tended to heal, the urethral stream was noticed to be again diminishing in size, and at the end of three months it had become quite small, and the wound in the perinæum had contracted to a fistulous orifice which showed no further tendency to close, more or less urine escaping through it at each effort to urinate. On the 16th of December following, Dr. Van Buren saw the patient in consultation with me at St. Vincent's Hospital, and advised a repetition of the operation of perineal urethrotomy. After the administration of ether, I performed the operation with the aid of a delicate bougie as a conductor. The stricture was freely divided, and a No. 14 steel sound could be readily passed into the bladder.

No catheter was retained in position. The sound was introduced daily for five days, and after this every second day. He had no chill nor fever; the urine came freely through the wound, until it closed entirely at the end of three weeks. He was then taught to introduce his own instrument, and remained under observation for two years.[1]

To further illustrate this, and other points in the after-treatment, I will now present, in tabular form, the results of twenty-five operations of external division of the urethra for stricture, which I have performed within the last nine years, showing the condition of the patient which rendered the operation imperative, the method employed, the progress, and the final result of each case:

---

[1] This case was reported in the New York Medical Record, vol. i., No. 8, page 181.

NO.	NAME.	AGE.	CONDITION, ETC.	OPERATION.	FEATURES.	RESULT.
1.	F. B.	47.	Impassable stricture from gonorrhœa. Abscess at root of penis. Threatened retention.	Perineal urethrotomy without guide. Stricture divided upon a small grooved probe.	No catheter retained. No urethral fever.	Wound healed in six weeks. The patient was seen eight years subsequently. No recontraction at the seat of the perineal incision.
2.	D.	25.	Impassable stricture from gonorrhœa. Threatened retention.	Perineal urethrotomy without guide. Stricture divided upon a small grooved probe.	No catheter retained. No urethral fever.	Wound healed in four weeks. The patient was seen three months afterward, and I could then pass a large instrument.
3.	W. J.	49.	Impassable stricture of eleven years' standing from gonorrhœa. Chronic cystitis, with dribbling of urine from over-distention of the bladder.	Perineal urethrotomy without guide. Stricture divided upon a small grooved probe.	No catheter retained. No urethral fever. Rapid subsidence of the cystitis.	Wound healed in a month. Patient left the hospital quite well and promised to continue to pass a full-sized sound occasionally.
4.	A. F.	36.	Impassable stricture from gonorrhœa. Perineal section in 1860. Catheter retained for four months. Relapse. Cystitis. Stricture again impassable in 1864.	Perineal urethrotomy without guide. Stricture divided upon a small grooved probe.	Catheter retained forty-eight hours. Urethral fever. Aggravation of cystitis.	Wound healed in six weeks. Patient dismissed after having been taught to use No. 17 conical steel sound. Was last seen six months after the operation, and was in good health.
5.	G. D.	35.	Narrow stricture of three years' standing, from gonorrhœa. Retention and extravasation of urine.	Perineal urethrotomy with the aid of a capillary bougie as guide.	No catheter retained. No urethral fever.	Wound healed in about a month. The patient was seen one year afterward, he was then introducing periodically No. 15 steel sound.
6.	R. M.	36.	Impassable stricture of twelve years' standing, from gonorrhœa. Perineal fistulæ and constant dribbling from overflow.	Perineal urethrotomy without guide. Stricture divided upon a small grooved probe.	No catheter retained. No urethral fever.	Wound healed in five weeks. Patient dismissed in five months; he was then passing a normal stream of urine, and using No. 13 steel sound.
7.	J. McD.	28.	Stricture of three years' standing, from gonorrhœa. Retention and extravasation of urine.	Perineal urethrotomy with the aid of a capillary bougie as guide.	No catheter retained. No urethral fever.	Death in forty-six days, from advanced disease of the bladder and kidneys.
8.	L. M.	33.	Old impassable stricture from gonorrhœa. Threatened retention.	Perineal urethrotomy without guide.	No catheter retained. No urethral fever.	Wound healed within four weeks. Patient taught to introduce No. 12 for himself.

9.	J. M.	45.	Narrow, unyielding stricture of several years' standing, from gonorrhœa. Very frequent and painful micturition with occasional dribbling. Perineal abscess.	Perineal urethrotomy with the aid of a capillary whalebone bougie as guide.	No catheter retained. No urethral fever. The case progressed in every way satisfactorily. Was up and about in a week.	Wound healed in three weeks. Patient was heard from one year after the operation, and was then enjoying excellent health, and was introducing occasionally No. 15 conical steel sound.
10.	H. F.	23.	Stricture of six years' standing, from gonorrhœa. Repeated retentions. Perineal fistula.	External urethrotomy of Mr. Syme.	No catheter retained. Rigor within a few hours after the operation, no urine having yet passed through the perineal wound, as it was drawn, by means of a catheter, during the operation. The rigor was followed by some febrile reaction with a pulse of 100. This, however, soon passed away, and he seemed to be doing well. He had no recurrence of the rigor, but on the following day his heart's action became suddenly feeble, and he resembled a patient in the collapse of cholera, with a cold and livid surface and pinched-up countenance. His mind was perfectly clear, he had no suppression of urine, no vomiting. He had no disease, as far as known, save constitutional syphilis, as evinced by copper-colored scars on the extremities, and some nocturnal rheumatism.	Death in fifty-six hours after the operation, probably due to thrombosis of the heart. No autopsy.
11.	J. T.	37.	Old stricture from gonorrhœa. Large perineal fistula consequent upon sloughing of the scrotum, from extravasation.	External urethrotomy of Mr. Syme.	No catheter retained. No urethral fever.	Wound healed in six weeks, except a small fistulous opening which would only admit a small probe. He was able to pass for himself No. 15. Was heard from one year after the operation, and was then in good health.

NO.	NAME.	AGE.	CONDITION, ETC.	OPERATION.	FEATURES.	RESULT.
12.	W. S.	17.	Traumatic stricture from a fall upon the perinæum. Perineal section. Catheter tied in. Severe recurring chills. Catheter removed on the fourth day, and the chills ceased, but the instrument could not be reintroduced. Relapse, with a perineal fistula.	Perineal urethrotomy with the aid of a delicate flexible bougie as conductor, four months after the first operation.	No catheter retained. No urethral fever. No. 14 steel sound introduced every day for the first five days, then every second day, and finally but once a week.	Wound healed in three weeks. Was last seen about two years subsequently, he was still passing his No. 14 sound once a week, and was in excellent health.
13.	G. J.	28.	Narrow traumatic stricture, from a fall astride of a beam, with occasional retentions, and much straining in micturition.	Perineal urethrotomy with the aid of a fine bougie as conductor.	No catheter retained. No urethral fever. No instrument passed until the fifth day, and then, No. 17 was introduced every third day.	Wound healed on the twentieth day. The patient was last seen two years after the operation. Was then passing a good stream of urine, though he had neglected to use a sound since his dismissal.
14.	G. G.	12.	Occlusion of the urethra near the bulbo-membranous junction, from a fall astride of a fence. Perineal fistulæ. Much straining in micturition. Cystitis.	Perineal urethrotomy without guide, with the object of establishing a permanent perineal fistula of sufficient size to permit of easy micturition.	No catheter retained. No urethral fever. Rapid subsidence of the cystitis. Instruments introduced every third day.	The fistula was kept open for nearly two years, by the occasional introduction of a No. 8 catheter, but, after he ceased the use of the instrument, the fistula soon contracted, and almost entirely closed. The patient was then subjected to a second operation by Dr. Stephen Rogers, of New York city, who tells me that the wound has entirely healed, and that the patient was doing well at last accounts.
15.	J. G.	24.	Narrow stricture from fracture of the pubes. Extravasation. Urinary fistulæ in thigh and hypogastric region. Cystitis. Constant dribbling.	Perineal urethrotomy with the aid of a capillary bougie as conductor.	No catheter retained. Erysipelas on the third day attacking the body and limbs, but not the perineal wound. The ward in which the patient was placed was infected, as indeed were the other wards, several patients being affected with erysipelas.	Secondary abscesses, in the thighs, from pyæmia. Death on the nineteenth day. No autopsy.
16.	J. O'C.	37.	Narrow stricture from severe contusion of the perinæum, and	Perineal urethrotomy with the aid of a capillary whalebone bougie	No catheter retained. No urethral fever. No. 15 steel	Wound healed in two weeks. The patient was taught to introduce

			probably fracture of the pubes. Retention on the eighteenth day. Urethra very sensitive. Dribbling. Threatened retention. Stricture would not yield to dilatation.	as conductor. Stricture divided upon a small grooved probe.	sound introduced every second or third day.	his own instrument. Was last seen a year and a half after the operation, and was then enjoying good health, and was passing a normal stream of urine.
17.	R. T.	35.	Occlusion of the urethra at the seat of injury, from a fall astride of a manger. Retention and extravasation a few days after the injury. Fistula in perinæo. Cystitis, straining, dribbling.	Perineal urethrotomy without guide, with the object of establishing a sufficiently large perineal fistula to facilitate micturition.	No catheter retained. No urethral fever.	The fistula had contracted somewhat, a year after the operation, but the condition of the patient was greatly ameliorated.
18.	F. McG.	46.	Impassable stricture from fracture of the pubes. False passage. Threatened retention of urine. Catheterism unsuccessful.	Perineal urethrotomy without guide. Hemorrhage to the extent of a pint, from oozing, occurred during the operation, but ceased spontaneously.	A short catheter was passed into the bladder through the perineal wound, and retained only twenty-four hours. No urethral fever. No bad symptoms.	Wound healed in seventeen days. The patient was only temporarily relieved. The stricture has recontracted and will soon require a second operation. The cause of relapse was the inability to introduce any instruments after the first week.[1]
19.	A.	45.	Resilient stricture of fifteen years' standing, with urinary fistulæ. Due, partly to gonorrhœa, and partly to a contusion of the perinæum.	External urethrotomy of Mr. Syme. Fistulous tracts freely laid open.	Silver catheter retained in position for forty-eight hours. Urethral fever on the third day.	Wound and fistulous tracts healed in six weeks. The patient was dismissed after he had been taught to introduce for himself No. 12. Was last seen two years after the operation, was enjoying good health, and was still using the sound.
20.	McW.	35.	Old, impassable stricture, due partly to gonorrhœa, and partly to a contusion of the perinæum while riding on horseback. Retention of urine. Failure of catheterism.	Perineal urethrotomy without guide. Stricture divided upon a small grooved probe.	Catheter retained in position, but removed by the patient within two hours. The instrument could not again be introduced. No urethral fever. No. 12 sound was introduced every second day.	Wound healed in four weeks. The patient was last seen five months after the operation. He was then enjoying good health, and was passing a normal stream of urine.

---

[1] A second operation—without guide—was performed upon this patient, on the 21st of April, 1869. His condition has since greatly improved; he is able to pass a normal stream of urine, and has been taught to introduce his own instrument, No. 15 conical steel sound, and has promised to continue its use once a week for an indefinite period.

NO.	NAME.	AGE.	CONDITION, ETC.	OPERATION.	FEATURES.	RESULT.
21.	P. L.	32.	Impassable stricture, due partly to gonorrhœa, and partly to laceration of the urethra. Retention and extravasation of urine, followed by urinary fistulæ.	Perineal urethrotomy without guide. Stricture divided upon a small grooved probe.	No catheter retained. No urethral fever. No. 12 sound introduced every second day.	Wound healed in nineteen days. He was taught to pass for himself No. 12 sound, and was last seen eight months after the operation. The fistulous tracts had completely healed. He was then in good health, and was passing a good stream of urine.
22.	J. H.	24.	Narrow stricture of long standing, partly from traumatic cause, and partly from gonorrhœa. Constant dribbling from overflow. Threatened retention of urine.	Perineal urethrotomy with the aid of a slender bougie as conductor. Stricture divided upon a small grooved probe.	No catheter retained. No urethral fever. No. 12 sound introduced every third day.	Wound healed in one month. The patient remained under observation for seven months. Was seen one year afterward, when No. 11 steel sound could be passed with ease.
23.	T. S.	36.	Stricture from contusion of the perinæum. Dilatation carried to No. 18. Relapse within a week, then retention of urine followed by perineal abscess.	External urethrotomy of Mr. Syme.	No catheter retained. No urethral fever. No. 16 sound introduced every third day.	Wound healed within six weeks. The patient was taught to pass for himself No. 16 sound. He is still under observation, and is passing a normal stream of urine.
24.	L. C. F.	27.	Stricture of long standing, from injury of the perinæum. Frequent retentions in the space of ten years. Constant dribbling from overflow. Cystitis and pyelitis. The case was very unpromising, but the operation was advised as his last and only chance.	External perineal urethrotomy.	No catheter retained. Chill, on the fifth day, followed by vomiting and pain in the region of the bladder and of the kidneys. Irregular slight rigors every day or two.	Death, on the seventeenth day after the operation, from advanced disease of the bladder and kidneys.
25.	R. S. P.	40.	Stricture of long standing, due partly to gonorrhœa, partly to an injury of the perinæum, while riding on horseback. Retention and extravasation, followed by urinary fistula. Constant dribbling of urine from overflow.	External perineal urethrotomy.	No catheter retained. No urethral fever. No. 12 sound introduced every third day.	Wound healed in four weeks. A small, fistulous orifice was still patent, but was in a fair way to cicatrize. He had learned to pass his own instrument, and promised to continue its use, once a week, for an indefinite period. Patient heard from, one month subsequently to his dismissal, and he reported that the fistulous opening had entirely closed. His general health was excellent, and he was passing a normal stream of urine.

In the cases just enumerated, I have adhered to the rules, given by Mr. Syme, to be observed in the operation of "External Urethrotomy," with the exceptions to be presently mentioned.

Mr. Syme's directions, as summarized by Sir Henry Thompson, are as follows:

1. Maintain the median line in the incisions.
2. Make a direct opening down to the staff, and not a tortuous one.
3. Divide the whole of the contracted part, rather more than less.
4. Do not cut so far back as to endanger the deep fascia of the perinæum, and use the knife in the deep incisions with the cutting-edge uppermost.
5. Do not close the end of the inlying catheter, lest urine be forced into or through the wound for want of patency in the instrument.
6. Avoid escape or displacement of the instrument.
7. If incisions are made far back, introduce the curved tube through the wound when the catheter is withdrawn.
8. Do not neglect dilatation during the progress of recovery.

I have, perhaps, departed from the fourth rule, by dividing the anterior layer of the deep perineal fascia in several cases of traumatic stricture at the bulbo-membranous junction, but no harm has come of this. It is scarcely possible to divide freely such strictures without running the risk of cutting that portion of the deep fascia of the perinæum. It is always divided in lithotomy, and there are seldom if ever any serious consequences. In a number of cases also I have cut with the edge of the knife downward, in making the deep incisions, and no mischief has resulted.

Rules fifth, sixth and seventh, have also been departed from in all but two cases (cases 4 and 19 in table), and, in these two, I feel confident that the retention of the catheter was the cause of urethral fever, and in one of them, also, of the aggravation of old cystitis.

I believe that the retention of a catheter in the bladder, after perineal urethrotomy, even for forty-eight hours, is not only unnecessary but harmful. Unnecessary, because it does not fulfil the supposed indication of preventing the flow of urine through the wound, and because the contact of the urine with the freshly-cut surfaces does no harm, as is exemplified by lateral and median lithotomy, and also by the cases which have been detailed. Harmful, because the presence of the instrument—a foreign body—in the bladder, sometimes causes ulceration and perforation of that viscus, and does give rise to inflammation and to urethral fever.

Vidal (de Cassis) says, however great may be the calibre of the catheter, a certain quantity of urine always flows between it and the urethra.[1]

Sir Henry Thompson, in speaking of the treatment of obstinate fistulæ, says: "Experience shows that, however large the instrument may be, and however closely it may fit the urethra at the present moment, before twenty-four or thirty-six hours have elapsed, it will lie loosely in the canal, and urine will pass by its side. . . . . . ."

He further says, "The mode of treatment, therefore, which consists of tying in a catheter, is to be regarded as inadequate to the cure of fistula, except so far as it produces dilatation; and it is one which has obtained countenance chiefly from the plausibility of a theory which is certainly unsupported in practice."[2]

In a clinical lecture delivered at the University of New York, February 6, 1866, Professor Van Buren condemned the practice of tying in a catheter after perineal urethrotomy. His reasons are so cogent and well put, that I shall quote them at length. He says: "If I felt at liberty to cite the mishaps of others as well as my own for your instruction, I could detail to you numerous examples of serious injury resulting from the prolonged retention of the catheter in the bladder—flexible as well as metallic. Besides chills and urinary fever, and ulceration of the urethra from pressure, I have encountered instances of cystitis, calculous formation, ulceration of the bladder, and fatal peritonitis, from this practice.

---

[1] Traité de Pathologie Externe et de Médecine Opératoire. Paris, 1841, t. v. p. 259.

[2] On the Pathology and Treatment of Stricture of the Urethra and Urinary Fistulæ. London, 1858, p. 360.

Moreover, I have satisfied myself by personal observation, as well as by the study of recorded cases, that the presence of a catheter in the bladder, after this operation, retards the healing of the wound, and thus increases the danger of permanent perineal fistula. The convexity of the catheter of ordinary curve, unless the point of the instrument is projected into the cavity of the bladder farther than is consistent with the safety of this organ, will make pressure more or less directly over the seat of the urethral incision; and this is especially the case in traumatic stricture, where the incision necessarily involves a part of the membranous portion of the canal. Influenced by this experience, I had long since abandoned the practice of leaving a catheter in the bladder, after incision of the urethra through the perinæum, for a longer period than forty-eight hours; further experience and observation have recently satisfied me that it is better for the patient, unless in exceptional cases, that the catheter should not be left in the bladder at all—as in the cases which form the basis of these remarks. In justification of this conclusion, I think, in the first place, that the experience of practical surgeons will confirm the opinion, that the tying of a catheter, either metallic or flexible, in a man's urethra and bladder is a proceeding attended by more or less discomfort, and often with danger. In some cases, the instrument cannot be tolerated from the moment of its introduction; in many, pain and uneasiness are constantly present; in others, chills and febrile reactions necessitate its removal—as in the case before us.[1] It is, therefore, to be regarded an evil, in a greater or less degree. Now, in the second place, what is the compensating good which justifies the practice? It is the general impression, I believe, that the presence of the catheter in the bladder, by preventing the flow of urine through the newly-made wound, will obviate the bad consequences attributed to the contact of urine with a recently-cut surface, and will consequently facilitate its healing; it may be, also, that extravasation of urine through the walls of the incision is apprehended by some. I question the correctness of these views, on the following grounds: 1. The presence of the catheter in the bladder does not prevent the escape of more or less urine through the wound, which almost invariably occurs in some degree, either at the time of the operation or subsequently. I have observed this fact in quite a number of cases, and it is mentioned, in a large proportion of recorded cases. 2. The consequences of contact of urine with the walls of a recent incision are not serious, as is demonstrated after the operation of lithotomy. 3. In the recorded cases which I have studied, the closure of the perineal wound is certainly delayed by the presence of the catheter in the bladder; and it takes place most rapidly when no catheter is worn. Finally, a fistula following the operation of lithotomy is exceedingly rare, and here the urine flows through the wound from the moment of the operation. As to the danger of extravasation of urine through the walls of the incision, it is only to be apprehended where the deep layer of the triangular ligament, the pelvic fascia, has been divided; or, to the extent of a few drops, when the scrotum has not been properly supported after the operation—a precaution too often neglected."[1]

---

[1] Case 12 in the table.

Mr. Syme, in referring to "between eighty and ninety" cases of external division, says: "Alarming symptoms were by no means rare, since every third or fourth patient suffered from rigors, vomiting, delirium, or suppression of urine."[2] No doubt exists in my mind that the presence of the catheter in the bladder was the exciting cause of these grave symptoms.

After having treated this large number of patients without any death, Mr. Syme met with two fatal cases, and he attributed these deaths to the contact of the urine with the wound, and then proposed the use of a short catheter, to be introduced into the bladder through the perineal wound, and secured in position. But this, though not so harmful, is, I believe, quite as unnecessary as the use of the long catheter.

A medical gentleman of New York city related to me the history of a patient on whom the "perineal section" had been performed, and where ulceration took place at the penoscrotal junction, from the prolonged retention of a silver cath-

[1] See Medical Record, Vol. i. No. 8, p. 180.

[2] London Lancet, August 21, 1858, p. 191.

eter, so that the instrument could be seen through the fistulous opening, which showed no disposition to heal.

Dr. Bumstead[1] alludes to a similar case in a patient who had been operated upon in California; and he also relates one instance where death occurred from retention of the catheter for a fortnight, "and at the post-mortem examination there was found a small, but deep, ulceration of the bladder, and another, quite extensive, of the inferior wall of the urethra in front of the scrotum, which was only separated from the surface by the integument."

A fatal case occurred in the practice of Professor Spence, of Edinburgh, where "peritonitis was produced by the partial penetration of the coats of the bladder by the in-lying catheter," which had only been retained *in situ* for forty-five hours. I find it recorded in Sir Henry Thompson's Treatise on Stricture, etc., London, 1858, page 278. The retention of a catheter, for forty-eight hours, in cases 4 and 19, gave rise to urethral fever, and to cystitis. The retention of the instrument for four days, in case 12, gave rise to severe recurring chills, and it had to be withdrawn in consequence. But, after the second operation, no catheter was tied in, and the patient did not suffer from rigors, nor from any other discomfort.

Is it not fair, then, after all this accumulated evidence, to conclude that the retention of the catheter in the bladder, passed either through the whole length of the urethra or through the perineal wound, does not fulfil the indications for which it is used; that it is, as a general rule, attended with danger, and that its omission is a safe measure?

In certain cases of traumatic stricture, especially where the urethra has been torn completely across, or where occlusion of the canal has taken place at the seat of injury, an exception, to the rule of leaving out the catheter, may be made, though it may well be questioned whether, even under these circumstances, the instrument is needed.

After I had performed the external division for occlusion of the urethra at the seat of injury, I once debated the propriety of leaving in a new gum-catheter, and renewing the instrument daily for a week—the same instrument never to be employed a second time, in order, more surely, to avoid the danger of incrustation. But this plan was not carried out, and the patient did well.

---

[1] On the Pathology and Treatment of Venereal Diseases, 1866, p. 316.

The eighth rule should, in my opinion, never be departed from ; on the contrary, the use of large instruments should be continued indefinitely, and not, as sometimes recommended, only during the progress of recovery. It is well known that, if large instruments are not introduced at intervals of a week or two after the union of the wound, a certain amount of recontraction will take place, although probably not to an extent to give rise to so bad a stricture as before, unless the original causes of the trouble should recur—such as gonorrhœa, injury of the perinæum, debauch, exposure, etc. Patients, who have been taught to introduce their own steel sounds, should, for as long a time as possible, be retained under observation, and the importance of keeping the instruments free from rust and smoothly polished, and the necessity of great gentleness in their use, constantly impressed upon them ; for, careless and rough manipulation, by giving rise to urethritis, or to laceration of the mucous membrane, is apt to cause relapse.

The rough use of the sound will, sometimes, bring on orchitis. The too frequent introduction of the instrument also occasionally produces this result. Another fact, worthy of remembrance, is, that the sound should not be retained in the urethra longer than five minutes. There are patients who are liable to attacks of orchitis in spite of the greatest care and gentleness in the use of the sound. This may sometimes be averted by advising them to take the following precautions:

1. Use a diluent drink through the day preceding and the one following the introduction of the instrument.
2. Take a warm hip-bath immediately after.
3. Support the testicles with a suspensory bandage.
4. Remain in the horizontal posture for twelve hours.

In the case of working men, or others who are obliged to be about through the week, it is well to recommend them to pass the instrument every Saturday evening after working hours, that additional rest may be had on the day following, if necessary, without loss of valuable time.

The term large instrument is only relative; the diameter of the sound should be proportionate to that of the uncontracted part of the urethra, and, if the meatus is abnormally narrow, it should be freely incised longitudinally along its floor, and the calibre of the canal then estimated. Some urethræ will only admit No. 12, while others are sufficiently capacious to permit the easy introduction of No. 18, an instrument of nearly 10½ millimetres (over three-eighths of an inch) in diameter.

This after-treatment of the external division of strictures is analogous to the treatment of deep burns near the flexures of the limbs, when it is so desirable to keep the member in an extended position in order to obtain a *wide cicatricial splice*, and thus allow for subsequent contraction.

Mr. Reybard,[1] having demonstrated that longitudinal wounds of the urethra do not generally give rise to stricture, recommends[2] that, during cicatrization—after the division of strictures—a large instrument be introduced, or, better, a dilator to separate the lips of the wound, and thus to augment the width of the cicatrix.

To arrive at a correct appreciation of the value of the operation of external division of strictures of the urethra, it is necessary to consider:

1. Under what circumstances the operation is justifiable.
2. What amount of danger attends its performance, and
3. How far it is entitled to be considered as a means of cure.

Sir Henry Thompson, after whom the last two inquiries are phrased, says: "It has been stated that the hazard to which the patient's life is exposed by it (the operation) is too great to be incurred for the sake of obtaining a cure of his complaint. This view has not improbably arisen, in some measure, from the still common but erroneous habit, already alluded to, of confounding external division of a permeable stricture upon a sound with the operation upon an impassable one without it."[3]

Professor Van Buren, in a published lecture,[4] remarks;

---

[1] Traité pratique sur les rétrécissements de l'urètre, etc., Paris, 1853, pp. 63, 64.

[2] Loc. cit., p. 442.

[3] Thompson, op. cit., p. 278.

[4] Medical Record, Vol. i. p. 280.

"The dangers of this operation depend upon the conditions which necessitate its performance, rather than upon the proceeding itself. If, as is always desirable, its necessity has been foreseen, and time secured for the examination of the internal organs, and ample preparation made, *the danger is trivial;* but if, on the contrary, as often happens in hospital practice, the patient falls into the surgeon's hands with prolonged retention or extravasation of urine, from recklessness and neglect, the operation is likely to be much less favorable. And, if, in addition to these serious complications, the stricture should prove to be impassable, and the operation is necessarily undertaken without any guide to the bladder, it becomes *one of the most difficult and uncertain proceedings of surgery.* The alternative of puncture of the bladder from the rectum, or above the pubes, may in rare cases be adopted from necessity; but these measures afford only temporary respite, inasmuch as they leave the stricture, the cause of all the trouble, unrelieved."

Dr. Markoe says:[1] "It must be evident to you that the success or failure of it depends upon the condition of the patient for which the operation becomes necessary, that the dangers of the operation itself can hardly be separated from those of the disease for which it is performed. Being a last and only resort for a desperate condition of things, we cannot select our cases nor prepare them for the operation."

Professor S. D. Gross observes: "The operation is by no means free from danger, and requires the most consummate skill for its successful execution. None but a madman or a fool would attempt it, unless he had a profound knowledge of the anatomy of the parts, and a thorough acquaintance with the use of instruments."[2]

I have quoted the opinions of these distinguished surgeons—pertinent to the estimate of the operation—as fairly mirroring the advanced mind of the profession, and that I may express my general accordance. But I must insist, most emphatically, upon a correct interpretation of the words "the operation being a last resource." While, beyond all question, the conscientious surgeon must propose to himself all other available and justifiable means of relief, yet, when these have been tried and have failed, the knife is not only the "last resource," but the *only* resource, and must be promptly and resolutely applied. The operation has often been deferred so long, that the bladder and kidneys have become irreparably damaged by the action of the frequently-retained urine, and finally the knife is used when all operative procedures are contraindicated. This long delay accounts, in a great measure, as I believe, for the large percentage of mortality which has followed the operation, and has brought it into disrepute. So great was formerly this mortality, that, toward the end of the last century, such authorities as Desault and Chopart positively condemned the operation, and it fell into disuse. Its revival in our country is due to the late Dr. Alexander H. Stevens, who performed it "with entire success, after the common modes of treatment had failed," in the year 1817.[1]

---

[1] Clinical Lecture on Perineal Section, etc., American Medical Times, Vol. i. p. 55.

[2] Diseases and Injuries of the Bladder, Prostate, and Urethra. Second Edition. Philadelphia, 1855. p. 801.

Beginning in April, 1820, Dr. Horatio G. Jameson, of Baltimore, had performed ten operations by December, 1823, without a death.[2]

Dr. David L. Rogers reports twelve cases, the first of which occurred in 1823.[3]

Two operations, by Dr. John C. Warren, of Boston, were reported in 1829.[4]

The first consideration, namely, under what circumstances the operation is justifiable, has been discussed with warmth, and extreme views taken thereof, by three classes of surgeons. The first class resort to cutting forthwith, in every case of narrow stricture, and assume that no other mode of treatment is applicable. The second class maintain that "it is not necessary in cases where an instrument can be passed into the bladder." The third class are of opinion that "the hazard to which the patient's life is exposed by it (the operation) is too great to be incurred for the sake of obtaining a cure of his complaint," that it is consequently unjustifiable, and that it should under no circumstances be resorted to. These diverse views have caused no little perplexity in the minds of the inexperienced.

---

[1] Med. and Surg. Reg., etc., N. Y. Hospital, p. 75.

[2] American Medical Recorder, Vol. vii, 1824.

[3] Philadelphia Medical and Physical Journal, Vol. xix, p. 186.

[4] Boston Medical and Surgical Journal, July 7, 1829.

The advances that have been made in our knowledge of the pathology and treatment of stricture of the urethra indicate a moderate and middle course to be pursued. It is now believed, by conservative and judicious surgeons, that the class of cases which requires this operation is small, and that, even in these cases, before resorting to the knife, gradual dilatation and all the other available means of relief should be thoroughly and faithfully tried. Impermeability, resiliency, or great irritability of strictures, are indications by which these surgeons are influenced in the adoption of this mode of treatment. In impassable strictures, attended with retention or extravasation of urine, or where there exist obstinate urinary fistulæ, few now entertain any doubt of the propriety of the operation. Narrow strictures, from traumatic lesions, are, it is thought, sufficient, as a general rule, to warrant the external perineal division.

The proper appreciation of the second consideration, namely, what amount of danger attends the performance of the operation, is of the greatest importance, as the risks of the operation have been greatly exaggerated, and some of them are more imaginary than real.

Much credit is due to Professor Syme, of Edinburgh, for recalling the attention of the surgical world to the operation, and for demonstrating, subsequently, by a large number of successful cases, that it was not as perilous as was formerly believed, provided it was done with due caution and at the proper time. Now the operation is as firmly established, and is considered as safe, as lithotomy—in cases uncomplicated with advanced disease of the bladder and kidneys—even where no guide can be introduced. In my own experience, the operation without a conductor has been attended with no ill results. In the twenty-five tabulated cases, it will be noticed that not a single death has occurred among the eleven patients operated upon in this manner.

Mr. Syme makes permeability a prerequisite to the performance of his operation. He assumes that there are no impermeable strictures of idiopathic origin, and that, if urine flows through the canal, an instrument can be made to enter the bladder by the exercise of patience and of sufficient dexterity. Nearly every surgeon of experience has been able to verify the fact that there are some strictures which are impassable to instruments of the minutest diameter, while they are permeable to the urine, and this, together with Mr. Syme's acknowledged failure to introduce a conductor in some instances, renders it superfluous for me to give any examples, or to defend the operation in impassable, or even in impermeable strictures, when the other indications are clear, especially since for the last half century the external section has been done in this country, for such cases, with great success.

On the other hand, those extremists, who maintain that permeability to instruments necessarily contraindicates the operation, meet with very few supporters. The aim of the majority of surgeons, in our day, is to endeavor to pass in a conductor, but, when this is not practicable, they operate without it, for the double purpose of dividing the stricture, and of relieving or averting retention of urine.

In 345 operations of external division of strictures, performed by American surgeons, 233 of which were done without a conductor, there were forty-one deaths; about twelve per cent. The assigned causes of death were: advanced disease of the bladder and kidneys in twenty-two cases, pyæmia in fifteen cases, erysipelas and pyæmia in one case, intra-pelvic abscess and pyæmia in one case, and thrombosis in two cases.

According to the late Prof. Miller, of the University of Edinburgh, the following are the dangers which attend the performance of the operation:[1]

1. Hæmorrhage.
2. Infiltration of urine.
3. Abscess in or near the wound, leading perhaps to fistula and irritative fever.
4. Intra-pelvic abscess.
5. Erysipelas.
6. Pyæmia.

---

[1] Wade on Stricture of the Urethra, etc., London, 1853, p. 209.

Not a single case of fatal hæmorrhage has been mentioned as having occurred among the 345 patients referred to above, the prominent features in many of which were kindly furnished me by the operators themselves.

Of these 345 patients there were but two who lost more than the usual amount of blood; in one case the hæmorrhage was from an anomalous branch of the artery of the bulb, which was controlled by ligature; in the other case—one of my own patients—about one pint of blood was lost from oozing, but the hæmorrhage ceased spontaneously and did not recur.

Troublesome hæmorrhage would, then, seem to be of very rare occurrence in this operation, though, among some cases reported by Sir Henry Thompson, Prof. Syme, and Mr. Henry Smith, there were a few fatal results.

Infiltration of urine, after the operation, is only liable to take place when the external incision is small, or when the attendant has neglected to support the scrotum with a sling-bandage. Abscess in or near the wound is not apt to ensue if the lips of the wound are kept asunder, and union by granulation promoted.

Only one intra-pelvic abscess was reported, among the 345 cases before referred to, and there, pyæmia coexisted. I believe that it will not usually follow, except as a secondary abscess, unless the incision should involve the pelvic fascia, and I can scarcely conceive of any constriction of the urethra which would necessitate so extensive an incision.

I have witnessed but one case of erysipelas, and, in that, neither the wound nor the genitals were affected. This is a complication which is liable to attend any surgical operation, and belongs to the wards of an infected hospital. Pyæmia may be placed in the same category as erysipelas, though a large proportion of deaths is credited to it, but it is just as liable to occur after divulsion or *internal* urethrotomy as after the external division.

In these 345 cases, the greatest proportion of deaths was due to advanced disease of the bladder and kidneys—chronic cystitis with concentric hypertrophy of the bladder, pyelitis, and renal abscesses, having been found in many of the cases. This condition of the urinary organs can frequently be discovered in time; and under such circumstances the operation is contra-indicated. If, then, we deduct the twenty-two deaths which were attributed to this cause, we have here a mortality of about five and a half per cent., as the legitimate mortality of the operation.

I do not propose on this occasion to take up the question of "urethral fever," as my experience, in regard to it, is immature; but I hope ere long to give the results of future observations on this sometimes formidable complication.

The third consideration must now come up for investigation, namely—how far the operation is to be considered as a means of cure. Sir Henry Thompson makes the three following points:

1. "It may fail to afford any relief."

2. "It may cure for a short period, and afterward be followed by a relapse."

3. "It may effect a permanent cure."

It may fail to afford relief if the stricture has escaped division, or, as Thompson suggests, if the occurrence of sloughing has prevented the possibility of the union of the wound. I have observed cases of failure from the former, but never from the latter cause. Fatal cases are of course excluded from consideration.

It will only afford temporary relief if the stricture has not been completely divided; or if the patient has neglected the periodical introduction of a sound; or if there is a recurrence of the original cause of the trouble. Mr. Syme attributes relapse to these causes, and also to the too rapid union of the wound.

It is now believed that the operation will afford permanent relief only so long as the patient continues the use of a full-sized instrument at intervals of a week or two; and, as far as I am aware, there is no method of treatment as yet devised, for obstinate stricture of the urethra, which will effect a permanent cure, without the occasional use of a sound.

In conclusion, I will advert to a few cases, out of many in my possession, which have been treated by surgeons of New

York, to show how much can sometimes be expected from this operation.

Prof. Post, of the University of New York, performed the operation twenty years ago, upon a patient who is now in the enjoyment of excellent health, is passing a good stream of urine, and is still introducing a full-sized instrument.

A gentleman, on whom Prof. Van Buren had performed the external section, for traumatic stricture, twenty years before, was under my care about two years ago, and I passed for him, once a fortnight, a No. 11 conical sound.

I assisted the same surgeon in a similar operation, five years since, the subject of which I saw but a few weeks ago; he was then in excellent health, and was introducing for himself once a week a No. 12 conical sound.

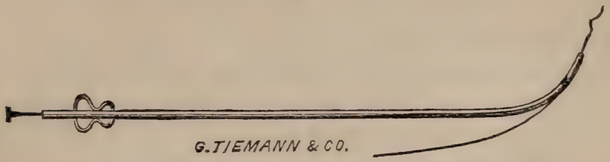
Dr. J. J. Crane, of New York city, mentioned to me two cases operated upon by him; one nine years ago, and the other seven years previously; they are still in good condition. I saw the latter patient with him a few weeks since, and was able to pass a No. 10 instrument. He had had more or less trouble after the operation, because of his neglect to use the sound; latterly, however, the instrument has been introduced at regular intervals, and he has greatly improved.

Dr. Lewis A. Sayre related to me the history of a patient, on whom he had done the operation of external division eighteen years ago. The man is still in very good health, and has had no symptoms of relapse.

One of my own patients returned to me eight years after the operation, without any recontraction, though he had used no instrument.

This contribution to the surgery of the urethra is offered, with the double object of awakening still deeper interest in an operation of singular interest and exaggerated danger, as well as to elicit from American surgeons the results of their experience in external perineal urethrotomy, that I may incorporate them in an essay upon the subject, which I am now preparing.

Addendum.—In connection with the matter under discussion in this paper, I would call the attention of the profession to a catheter devised by myself, for use in retention of urine arising from stricture of the urethra. The accompanying description and wood engraving of the instrument are copied from the *Medical Record*, May 15, 1869.



The catheter is three millimetres in diameter, nearly corresponding to No. 3 of the English scale, and is conical, its point being two millimetres in diameter, about equal to No. 1 of the same scale. A groove on its convex side extends a distance of four inches, and is bridged over in its last twelfth of an inch, so as to form a canal for the reception of a delicate whalebone guide. The catheter eye is on the concave side of the instrument, about three-fourths of an inch from its point, and is kept closed by a well-fitted stylet. Its curve is equal to one-fifth of the circumference of a circle three inches and a quarter in diameter.

The manner of using the instrument is as follows: With a small syringe, the urethra is to be filled with olive oil, and an attempt made to introduce a probe-pointed whalebone guide, half a millimetre in diameter, and of the length of an ordinary bougie, the point of which may be made temporarily spiral by immersion in boiling water, then twisting around a small staff, and suddenly cooling it. If its point becomes engaged in a lacuna, it is to be withdrawn a little, and carried onward with a rotary movement. If it enters a false passage, it is to be retained *in situ* with the left hand, while another is passed by its side. If this second guide makes its way into the false passage, it is to be treated precisely as was the first, and the operation repeated till one guide be made to pass the obstruction and enter the bladder. Sometimes five or six guides are thus caught before the false passage is filled up, and the natural route opened. As soon as the bladder is entered by a guide—which is known by the instrument being easily moved in and out—the other guides are to be withdrawn, the free end of the retained guide passed through the canal at the end of the catheter, and this instrument carried down the urethra along the guide, until its point reaches the stricture. Generally, with very slight pressure in the right direction, the catheter may be made to enter the stricture and finally pass into the bladder. The guide may be kept in position after the withdrawal of the catheter, and dilatation carried on by the successive introduction of larger sized catheters of similar construction; or divulsion may be resorted to by means of Mr. Holt's or Sir Henry Thompson's instrument, modified by means of the terminal canal for the passage of the guide; or internal urethrotomy may be practised with any of the various urethrotomes, having only this simple modification; or, as has already on several occasions been done, the retention catheter may be made available in external urethrotomy, instead of Mr. Syme's staff.

Art. II.—*Report on the Epidemic of Yellow Fever which prevailed at Wilmington, N. C., in the Fall of* 1862. By Wm. T. Wragg, M. D., of Charleston, S. C.[1]

At the time of our arrival the alarm and excitement of the population were thoroughly aroused. A large part of the inhabitants had fled from the city to seek refuge in other places, and fires of rosin and lightwood were burnt in the streets in every portion of the city.

Arriving at 1 o'clock, A. M., my attention was first attracted by the dark canopy which overhung the city, arising from innumerable fires in every street and yard. On entering the city at the railroad depot, I noticed the disagreeable odors which filled the air, and these became more evident as I advanced into the town.

[1] The distinguished author of the report which we have the pleasure of laying before our readers, was sent from Charleston, S. C., to Wilmington, N. C., in the autumn of 1862, to investigate the origin and character of the disease then prevailing epidemically in the latter city. The report he prepared on the subject was sent to the War Department at Richmond, and found its way, in a mutilated form, to the Medical Journal, published at Richmond, during the war. It was also noticed by Dr. E. Harris, in the volume of Reports issued by the Sanitary Commission. It is now produced, as it deserves to be, in an unabridged or uncondensed form.—*Ed. N. Y. M. J.*

The hotels were all closed, and, when admission into one of them was obtained, I was struck with the same want of care as had been noticed in the streets. When daylight appeared, the want of cleanliness, displayed both in the house and on the premises, accounted for the foul air around. In the yard were seen piles of offal, consisting of old bedding, rags, scraps of vegetables, and, in short, the refuse matter of all sorts usually found about the habitations of man when the demands of cleanliness and care have been lost sight of. Further observation soon convinced me that similar neglect had produced the same state of things generally about the city. On inquiry I learned that the neglect of scavengering was owing to the emergencies of the times, which had drawn away all the available labor from ordinary city duties and concentrated it on the military works.

In my first interviews with the resident physicians, I learned that their unanimous opinion was, that yellow fever had been introduced into Wilmington by the steamer Kate, from Nassau, N. P., which port she left on the 2d of August, arriving at the wharf in this city on the 6th, at 2 o'clock, P. M. It was stated that at the time of her arrival she had a sick man on board, and that others of her crew were taken sick soon after, and, being carried to boarding-houses, spread the fever among those who nursed them or were near them.

It was also stated that, among the earlier cases, occurring amid the resident population, were those persons who had the most direct intercourse with the vessel for trading or other purposes.

With my mind strongly influenced by these positive and unanimous expressions of opinion among the resident physicians in regard to the imported origin of the disease, I entered on the duty of visiting the sick. In riding about the city, my attention was directed to its topography.

Wilmington is situated on a series of dunes. The soil is entirely sea-sand, so dry as to be unfit for horticultural purposes, and only sustaining such vegetation as thrives in the lightest soils. A few vines and garden vegetables are reared by the aid of enriching manures. The natural growth is scrub-oak, pine, and wiregrass. This sand is always dry on the surface, the heaviest rains only moistening it a few inches, and the warmth of the sun, in a few hours, evaporating the moisture and rendering it as dry as before. But this dryness is only on the surface. A short distance below, varying with the elevation or the depression of the spot at which the examination is made, water is found in abundance. This water is pure and fit for drinking. The whole site of the city abounds in springs; and wells, sunk from six to twelve feet, give ample supplies of water. Owing to the conformation of the surface, the natural drainage is bad. The irregular elevations leave corresponding depressions, in which the water is held as in so many cups, and it can only be run off *rapidly* by means of artificial drainage into the river. The springs above alluded to *gradually* draw off this superfluous water by forming branches (as they are called), through which it finds its way into the river; but in rainy seasons this process is too slow to keep the water-level below the surface of the earth in the low places, so that the natural tendency of this conformation is to the production of ponds, which multiply in wet weather and diminish in dry. In this state of things it is evident that, without artificial drainage to hasten the escape of the water in rainy seasons, not only must the soil be saturated and the ponds filled with water, but the atmosphere must also be surcharged with moisture. This was the fact formerly, and at that time Wilmington was extremely subject to all the varieties of malarial and typhoid fevers and all the other diseases, as diarrhœas, dysenterics, etc., which are produced by a moist climate and hot temperature. Latterly, advantage having been taken of the facilities offered for artificial drainage by the elevations and depressions of the surface, many of the ponds were dried by this means, and a marked improvement was soon manifest in the healthfulness of the city, and the qualities of the atmosphere; it became dryer and more salubrious. But, owing to the causes elsewhere detailed, the advantages obtained by the care and labor of former years have this year been lost, and a very different hygienic condition at present prevails.

This cannot fail to strike the most casual observer, and my attention was strongly attracted to the palpable causes of disease I met with both in the central parts of the city and in the suburbs.

Along some of the principal streets I saw the cellars flooded with water. In the yards I was called into, I saw, on every side, the accumulated refuse of the house, the kitchen, and the stable. The population exhibited the want of all the comforts of life, for, in addition to the scarcity entailed on them by the blockade, they were suffering from that arising from the closure of the places of ordinary supply—the grocery stores, the market, the country contributions, etc.—all were closed up. Gloom pervaded everywhere; and the impression which generally prevailed, that an attack of the fever was equivalent to a death-warrant, depressed the moral courage and destroyed the resiliency of the body.

The suburban population I found in a condition, if any thing, worse than that of the central residents. The heavy rains of the late summer and early fall had created a state of things well calculated, it seemed to me, to generate disease. Through many parts of the town, in those portions, ponds of water, stagnant and covered with green vegetation, existed. Some of these ponds, I was told, had been drained in former years because they occasioned sickness, and had always been kept carefully dry till this season, when, from scarcity of labor, they had been allowed to refill by the choking up of their vents. In many places new ponds were formed by the unusual quantity of rain.

To specify a few of these, I may mention a pond on the Rouse Lot, not far from the gas-works, commencing at the corner of Front and Boundary Streets and extending eastward. This pond was formerly considered a cause of disease, and had been drained at considerable expense. The vent had become choked up this year, and it was now again, as it had been before, a green, slimy sheet of water, with muddy and badly-smelling margins.

Farther to the northeast, at the corner of Sixth and Castle Streets, there is another low spot, where the surface of the earth, for the space of several acres, is covered with a thin sheet of stagnant water.

Still farther to the northeast, on the southern line of the lot occupied by the State stables, at the corner of Eighth and Dock Streets, where about one hundred horses and mules are kept, there is another pond, into which the stable offal is thrown, thereby occasioning a most offensive smell, and furnishing an immense amount of putrescent vegetable material, combined with animal matters, deposited by so large a number of horses.

A short distance to the east of this place, the little valleys among the hills about the Marine Hospital have been, from time to time, in the last six weeks, alternately filled with water and then dried, as the heavy rains would first bring up the water-level above the surface of the earth and the evaporation again carry it below. In these hollows the water-line is never many inches below the surface of the earth.

At some distance farther to the east there is a low, swampy piece of ground, of many acres in extent, badly drained; and about half a mile or less from the eastern suburbs of the city, in the same direction, there exists a very large mill-pond, running along the entire eastern face of the city, and covering an area of many acres—say one hundred or more. This pond has often been pointed out by the practising physicians as the cause of malarial fevers of the very worst type, as well as of every other low grade of disease.

Dr. Thomas, a most intelligent physician, who has practised in Wilmington for the last ten or fifteen years, informs me that he has been in the habit of warning the inhabitants of the neighboring portions of the city, every fall, of the danger they incur from this source.

During the early summer, while the military defences were in process of erection, the skirting of trees that intervened between this pond and the city was cut down, to allow the play of the guns placed in position there; thus removing the only barrier, which existed before, against the motion of the gaseous emanations of this extensive sheet of stagnant fresh water toward the city. In the latter part of the summer a succession of deluging rains not only filled up the low places, above alluded to, and saturated the open, porous soil of the city, so as to form other ponds, fill up the cellars, and raise the water-level of the earth so as to sob the sand up to the very surface, but it overflowed the large mill-pond, and, washing away its bank, gave vent to a large part of the water, and left extensive margins entirely exposed, as well as great quantities of decaying wood in the central parts of the pond. Attempts were made to repair the dam, with partial success for a time, but succeeding heavy rains again removed the barriers, and the water, escaping again, exposed, afresh, new surfaces to the action of an intense solar heat. The smell arising from this half-drained surface has been represented to me as most suffocating.

For the greater part of this time the wind prevailed with unusual steadiness from the east, thus wafting these offensive emanations directly over the city. The temperature of the atmosphere was higher than usual, and the heat of the sun's rays was described as almost insupportable. This high degree of atmospheric temperature lasted for several weeks unremittingly.

I learn from Drs. Thomas and Anderson that fevers of a malarious type were more than usually prevalent. These fevers steadily assumed a more serious character as the season advanced. They often terminated in jaundice, and cases of this latter disease were of unusual frequency, even when no remittent fever had preceded them. There were, also, an unusual number of cases of diarrhœa and dysentery, in many instances assuming a typhoid character.

Such was the state of things in and around Wilmington when the Kate arrived at her wharf near the foot of Market Street, on the 6th day of August, at 2 o'clock, P. M. Desiring to ascertain, as far as possible, what agency, if any, this arrival may have had on the origin of the yellow fever, I instituted a strict inquiry, both among the physicians and the inhabitants. My first object was to know whether any cases of fever with symptoms resembling those of yellow fever (whether they had terminated fatally or favorably) had occurred before the arrival of the Kate. The first information bearing on the point was obtained from the inhabitants of one of the humble residences near Rouse's Pond. This entire family (the Lamons) passed through the disease, one of them (Mr. Nickols) dying with black-vomit. I was informed here, while incidentally conversing with the inmates of this house, that they had been performing the last offices for those who had died around them for many weeks, and, among others, they mentioned the guard-man, Smith, who had died about the first of August, under the care of Dr. Schonwald. He was sick, they said, four days, and when he died the body was yellow, and in every respect like those they had since seen. I called on Dr. Schonwald, and obtained from him the following notes, extracted from his book, which I will give in his own words: "On the 22d of June I was called to see Mr. Cling, of the German volunteers, who lived in an alley near Front Street, opposite the Cape Fear Bank; the symptoms were pain in the head and back, aching all over, high fever for two days; could not retain any thing on the stomach for four or five days; inclined to vomit all the time. Turned yellow all over; remained yellow till after recovery.

"On the 26th of July was called by A. E. Hall, Esq., to attend a mulatto boy, J. Sutterton; he was previously attended by another physician. Symptoms: had high fever; yellow all over; could not retain any thing on his stomach; what he vomited looked like snuff; restless all the time; died two days after I was called to see him; lived in Third Street.

"On the 30th of July I was called to see Mrs. E. Hansley. Symptoms: severe pain in the head and back; aching in all the limbs; high fever for two days after; she could not retain any thing on her stomach for three or four days; inclined to vomit all the time; what she threw up looked like snuff mixed with blood; turned yellow all over; remained yellow till and after she recovered; lives corner of Seventh and Red Cross Streets.

"On the 4th of August I was called to see Lieut. Davidson, of Newkirk's cavalry. Symptoms were: severe pain in head and back; aching all over; high fever; inclined to vomit; vomited black, bloody stuff, and passed the same; turned yellow all over. I considered it a dangerous case. Dr. Thomas was called in. He died two days after. Lived in Third Street, north of Market.

"On the 5th of August I was called to see a girl, boarding at Mrs. McLin's; her name was Georgia Weeks. It was a house of ill-fame. Symptoms: severe pain in head and back; vomiting black stuff; could not take nourishment or medicine; vomiting all the time; yellow all over. Died next morning. Was sick two days before I saw her. Lived in Water Street in a house called 'Hole in the Wall.'"

Four out of these five cases, it will be seen, threw up black-vomit, and all of them antedated the arrival of the Kate, and, though they occurred in the practice of one not recognized, by the medical fraternity of Wilmington, as one of the profession, they are, nevertheless, entitled to be considered as facts for record and examination. It was well known in Wilmington that they had occurred; the symptoms they presented were the subject of conversation, and one of them (that of Lieut. Davidson) finally terminated under the care of Dr. Thomas, one of the most distinguished physicians of the place.

It is very much to be regretted that the illness and absence from Wilmington of this distinguished physician prevented me from obtaining, in writing, the valuable information he possessed in relation to this subject. I may state here, however, that in conversation with me he gave me many details entirely corroborative of the statements of Dr. Anderson in relation to the sanitary condition of Wilmington, which statements will be given hereafter, in the very words of that accomplished physician.

Dr. Schonwald goes on as follows: "On the 8th of August I was called to visit a man named Robert Smith, town-guard and butcher. Symptoms: cold hands and feet; head hot; yellow all over; vomited black stuff. Died 9 o'clock next morning. I understood he had been stimulating for five days; complained of being sick in his intoxication. Took sick 9 o'clock at night and died at 9 o'clock next morning. Lived in Twelfth Street."

This man, Smith, the guard-man, of whose case I had first heard from the Lamon family, as mentioned above, died, as they informed me, after an illness of four days; so that, although he was seen by Dr. Schonwald on the 8th, he was taken on the 5th, which brings his case, also, anterior to the arrival of the Kate. He, also, had black-vomit, making five out of six of Dr. Schonwald's cases with that symptom. His residence was a short distance north of the Rouse Pond.

We have here, then, six cases of well-marked yellow fever, all occurring before the arrival of the Kate, in the practice of one physician. The only other resident practitioner spared by the scourge was Dr. Anderson, and his testimony I will now introduce as I took it down from his own dictation.

DR. ANDERSON'S STATEMENT.

"During July, August, and September, the entire country was deluged with rain. Ponds formed on high and dry places where water was never known to accumulate before, and, owing to neglect of the culverts, especially on Front Street, near Roberts's foundery, a large, long, shallow pond was formed, the bottom of which was composed entirely of the sweepings of the streets—old shoes, rags, pieces of tin, and refuse matter of all descriptions, which had been thrown in by the town carts, in order to raise the valley to a level with the adjoining streets. This spot is known by the name of the Rouse Lot. The bottom of this pond was alternately dry, from evaporation, and exposed to the intense heat of the sun, and then again flowed by fresh rains, when it was covered by green slime and exhaled a most offensive odor. One square south of this pond, in the direction of the prevailing winds, the first cases of fever commenced. On the 1st day of August, a young man, in the employment of the Government, by the name of Morris, was taken sick with all the symptoms of yellow fever, and recovered, after a protracted illness. Three squares east of Rouse's Pond, on Fourth Street, another pond formed in the immediate vicinity of a house occupied by Mrs. Johnson, who died with black-vomit, and had two children ill with yellow fever. These cases occurred about the 12th of August. One square south of the same pond, the case of Smith, the guard-man, occurred on the 5th of August.

"Around these two ponds many fatal cases of the disease have continued to occur during the whole course of the epidemic. In the Campbell House, one door north of the Rouse Pond, several fatal cases occurred, and this quarter of the town has been more afflicted than any other.

"On Market Street, commencing at the Carolina Hotel, on the north side, there is a range of cellars which have been covered at least one foot deep with water, and, though frequently bailed out, continue to be flooded, and are still filled with water. Most of these cellars are unused, but are more or less filled with accumulated trash, scraps of old leather, and decayed harness. Four of the druggists' stores are over these cellars, and floating about in the water were straw, from old hampers of wine and medicines, leaky casks of oil, varnish, acids, and paints. One could hardly walk in these cellars without having the water coming over the tops of the boots, and in the open parts, and in front where the water was exposed to the sun and light, a thick coating of green slime floated on the surface. One of the druggists occupying these stores was among the earliest victims of the disease, and, from another, two more were buried in succession, and from the third, both the principal and assistant were taken down with the disease, and the occupant of the fourth was also ill. Indeed, for several days there was no druggist in Wilmington, and the stores had to be supplied from Mobile, Charleston, and Savannah.

"On the south side of Market Street, just opposite to these druggists, many fatal cases occurred, and scarcely one of the inhabitants of this section of the city escaped an attack, which in most cases proved fatal.

"On that part of Water Street lying north of Market, there are no cellars to the buildings, but the floors are for the most part raised two feet from the ground, with free ventilation, by means of perforated copper-plates let into the wall. The incessant rains had flooded the earth beneath these floors to such an extent, that the water rose above the joists, and swashed up through the cracks of the floors as persons walked over them. These stores were occupied by small retail dealers, mostly Germans, and it was notorious that the earliest cases of the fever were among them.

"The deluging rains, above alluded to, were succeeded by an unusually high range of the thermometer, with most scorching heat of sun, almost insupportable by man, and even by the animals of labor. The city was enveloped in vapor from this heat and dampness, and at the same time the dew-point was unusually high. The leaves were covered with water, as after heavy rain. Every thing was covered with mould, even the books in libraries, and the clothes in the presses. Shoes cleaned over night were mouldy in the morning. The goods in the stores were in the same condition.

"Owing to the absence of the population, in consequence of the fear of an attack on the city, and the attention of the authorities being turned to the defences of the place, little or no scavengering had been done for some time, so that the more populous portions of the city were in a very dirty condition, with large quantities of decaying offal collected in the yards. This was particularly the case in the Marcus Hotel, at the corner of Market and Front Streets, and also the Palmetto, a few doors north of Market Street, in both of which early and malignant cases of fever occurred.

"On the eastern border of the town, at the distance of about half a mile from the limits, there is an extensive mill-pond, long and narrow, and facing the whole of that side of the town. It covers from fifty to one hundred acres of land. About the latter part of August, in the midst of the heavy rains, the dam broke, and emptied the contents of this extensive pond to the depth of five or six feet, laying bare large quantities of rotting wood, and extensive margins of slimy soil. From this denuded surface there arose a most offensive odor, which was wafted directly toward the city by an unusual prevalence of easterly winds. The skirt of wood which intervened between this pond and the city had just been cut down, to allow the guns, placed in position on its city side, to play; so that there was no impediment to the progress of the malaria.

"The earth has been broken up all around the city for the construction of fortifications, thereby exposing extensive surfaces of soil.

"Nearer the city and, indeed, within its limits, around the Marine Hospital, which is built on a high hill, and, usually, perfectly dry spot, the heavy rains have caused the water in the little valleys to rise and fall, alternately, above and below the surface of the earth, as it was more less abundant. And near by the same region, on the lot occupied by the State stables, is an extensive pond covered by green vegetation, into which the refuse of the stables has been deposited for many months, producing an offensive state of things.

"This region has been occupied for many months by encampments of soldiers, by whom much filth and refuse have been collected in the by-places.

"The health of this part of the town, which in ordinary seasons has been very good, has, this year, been very severely handled by the epidemic. These causes of disease, it would appear, had been producing an unhealthy state of the atmosphere for many weeks previous to the appearance of yellow fever. Camp-measles, dysentery, and typhoid fever in an aggravated form, were very common. Jaundice had become epidemic. It has been estimated that about one-fourth of the remaining population and the soldiers had the disease, which, in many cases, proved fatal. Many of the cases, at the time supposed to have been jaundice, are now believed to have been early cases of yellow fever.

"Under this state of things in Wilmington, the steamer Kate arrived from Nassau, on the 6th of August, which port she left about the 2d. Captain Lockwood stated to gentlemen in Wilmington, that the yellow fever had been brought to Nassau by the ship Flying Cloud, from Havana, which port she left early in July, loaded with coal; having reached Nassau about the middle of the same month. Soon after the arrival of the Flying Cloud in Nassau, the British steamer Kersonese took her place to leeward of her. The Flying Cloud had the disease on board at the time, and it was soon communicated to the crew of the Kersonese, several of whom died of it on the passage of the ship to Bermuda. It was, in the same way, communicated to other vessels in the port of Nassau, and, finally, to the inhabitants of the town, this being the first time it has been known to have been epidemic in that place.

"The Kate, on her passage out, was chased by a Federal steamer for several days. The fires in the furnaces were driven to the utmost extent that prudence allowed. Very little wind prevailed, and what there was was aft, so that the circulation of air on board of the ship was very imperfect. The engineer states that at the time of the chase, and up to her arrival in Wilmington, the vessel was so much heated from the fires in the furnaces that the thermometer stood at 140° in the saloons, gangways, and state-rooms. That the wood-work was so much heated, that it was impossible to bear the hand pressed upon it. That in the fire and engine-rooms the thermometer stood at 180°. The men worked in nothing but their drawers, and were bathed in perspiration. And this heated condition of the vessel was kept up for several days after her arrival in Wilmington, consequent upon the intense heat of the atmosphere there.

"The vessel arrived in Wilmington at 2 o'clock, P. M., August the 6th, one of the hottest and most oppressive days of the season. Immediately after her arrival, Dr. Anderson was called to see O'Donohoe, one of the firemen, who had been taken sick the day before, being the third day out from Nassau. His symptoms were intense headache, injected eyes, pain in the back, nausea, and vomiting. In his delirium that night, he strayed away from the ship, and Dr. Anderson saw him no more. After rambling about for thirty hours, he was taken into the Marine Hospital on the morning of the 8th, where he died.

"On the evening of the 16th August, Dr. A. was called to visit a seaman, named Denis Mitchell, of the Kate, in the house of a man named Campbell, four hundred feet north of the Rouse Pond, above described. He had been sick for several days, on board the vessel, while lying at the marine railway near by. This patient had all the symptoms of a violent attack of yellow fever. He was delirious, and refused medicine. On the morning of the 17th (the next day), the patient was laid out dead and ready for interment, while the adjoining room was filled with spectators of both sexes examining the body and indulging in carousal.

"Three or four days after the death of Mitchell, Campbell, the proprietor of the house, his wife and children, all died of the disease, as did also many of the other spectators.

"At the same time, on the opposite corner of the square, Mrs. Peterson was attacked and recovered; but two inmates of her house have since died.

"On the 21st of August, Dr. A. was called to see Mr. Egan, chief mate of the Kate, on board the vessel, which had, by that time, left the marine railway, after having been cleansed and prepared for the reception of her outward cargo. On the same evening he was removed to the Palmetto Hotel, where he was kindly attended by the proprietor, Mr. Bailey, and his son, and other members of the family. On the 24th the Kate sailed for Nassau, with Mr. Egan on board, convalescent. Mrs. Bailey and her son have both died of the disease, having been attacked, the latter in the beginning and the former about the middle of October.

"Before leaving the history of the Kate, it may be stated that she was discharged by soldiers detailed from regiments stationed *near* the city, and, so far as can be ascertained, no case of yellow fever has occurred among them, nor among any of the partners or employés of the firm to which the Kate was consigned.

"On the 15th of August, Mr. Thomas Holden was attacked with all the symptoms of yellow fever. He lived at least half a mile from where the Kate lay, and had had no communication whatever with her.

"On the 28th of August, Dr. A. saw Walter Furlong, who had all the symptoms of yellow fever. He lived near the Catholic church, in a central part of the town, having had no communication with the Kate or any of the places where her sick had been. He recovered.

"From this date the disease increased rapidly in the practice of Dr. A., and the other physicians of Wilmington, and, on the 14th of September, the official announcement was made that the disease was epidemic. On the 25th, Dr. Dickson, one of the most distinguished physicians of the State, fell a victim to the scourge, and soon after Drs. Thomas, Swann, and Love, were attacked, and, after severe illness, happily recovered. At this time there were only three out of eight resident physicians left for duty."

In this statement, it will be observed that the case of the young man, Morris, in Government employment, is mentioned as having occurred on the 1st of August (one square south of the Rouse Pond), making the *seventh* for which the Kate cannot be held responsible; while the cases of Mrs. Johnson and her two children (in the vicinity of the same pond, being only three squares east of it and adjoining another pond) occurred *about* the 12th. If they *commenced* on the 12th, they were only six days after the arrival of the vessel, and while she was half a mile off, in a direction against the prevailing winds; and, if they *terminated* at the time stated, they must have sickened just about the date of the arrival.

On the 6th of August, the day the Kate arrived, Dr. Anderson saw O'Donohoe on board. He left the vessel that night, in his delirium, and, after wandering about for thirty hours, was taken into the Marine Hospital on the morning of the 8th, where he died the same day. There was no doubt, in the minds of any who saw him, of the nature of his disease. Let us see if he communicated it to the inmates of the institution.

By the kindness of Surgeon Custis, of that Hospital, I obtained from the books of the house the following facts: The next death that occurred, after O'Donohoe's, was that of Dixon, who entered the Hospital on the 20th of August (twelve days after the death of O'Donohoe), having been ill for some days previous. "He had daily paroxysms of chill and fever, and died, on the 26th of August, in a congestive chill." The next death was that of Veach, on the 28th of August, "of remittent fever." The next case was that of Getty, and "his was the first case of black-vomit. He was admitted on the 28th of September. He recovered. He has been in Wilmington doing Provost-guard duty."

This man Getty, it will be remarked, entered the Hospital fifty-one days after the death of O'Donohoe. It will, also, be noticed that he had been doing exposed duty in Wilmington after the yellow fever had been officially declared epidemic.

"The next case of yellow fever was that of Murrell. He died on the 2d of October. He, like Getty, had been doing Provost-guard duty about Wilmington."

After this time other cases of yellow fever were admitted and treated in the Hospital, and Surgeon Custis informed me that they all had been constantly about the streets of Wilmington, on duty or otherwise.

The next point to which my inquiries were turned was, to ascertain if the disease had spread beyond the limits of Wilmington, in other words, to learn whether any well-authenticated cases could be cited in individuals who had not been in Wilmington. Cases had occurred among the refugees at several of the settlements on the Sounds; at various places in the country residences around; at points on the Cape Fear river, above the city of Wilmington; among the camps near and at a distance; and, finally, at Smithville, near the mouth of the river. After the most careful and diligent investigation, I could not learn that even a suspicion, of its having been propagated among those who had not breathed the tainted air of the infected city, was entertained in regard to any of these places, except it may have been so suspected, by some persons, in reference to Smithville. From Prof. Prioleau, who spent some weeks there, during the greatest prevalence of the disease, I learn that many of the inhabitants attributed the sickliness of their town to communication with Wilmington; and I also learn, from the same high source, that, so far as he could learn, every individual attacked in Smithville had been in Wilmington at some time during the sickly season; and that, though some few had not been there for two months anterior to their illness, yet most of them had been there much later. It is reasonable to suppose that this statement is in strict accordance with the facts, when we reflect that there is daily intercourse between the places by land and water.

With this historical statement of the circumstances connected with the appearance, extension, and limitation, of the disease, the reader is in possession of all the data requisite for the formation of his own opinion as to the origin of the epidemic.

The symptoms presented in these cases did not differ from those usually described. The attack usually came on suddenly, though occasionally the patient was uncomfortable and unwell for several days before the actual invasion. A chill, in some cases amounting to an ague, generally commenced the onset. Pain in the head, back, loins, and limbs, immediately followed, and very soon there was a feeling of soreness all over the abdomen, from the diaphragm to the pubis. Nausea and vomiting were often attendant upon this stage of the disease, when the contents of the stomach, usually undigested, and, afterward, bilious matter, were freely discharged. Fever at once set in, when the heat of skin was usually intense, though not always dry; for sweating was often profuse, without abating the intenseness of the burning, acrid heat. The pulse was, generally, frequent (sometimes so rapid as to reach 120 or 130 in a minute), full, hard, and bounding. The headache and pain in the back soon became intense, and often unbearable. The face was flushed, and the eyes red and injected. The redness of the eyes sometimes resembled the pink hue so well seen in the white rabbit, sometimes the stupid flush of the drunkard, and often the dry, injected, swollen look of inflammation from long exposure to cold, high wind. The flush of the face, though at first florid and red, with an active capillary circulation, quickly returning into the vessels after being forced out by pressure with the finger, was, on the contrary, in other cases, dull, dark, and dusky, with a sluggish circulation, slowly returning, when pressed away with the finger, and giving to the patients the appearance of having been thoroughly smoked. For the first twenty-four or thirty-six hours these symptoms steadily increased. The headache and pain in the back became unbearable. The heat of skin was often intense. Sighing, moaning, and tossing about were incessant. Delirium and wakefulness marked the nights. Thirst and burning inward heat tormented the patient. Oppression and fulness of the chest, as if there were something pressing upward, induced him to believe that he would be relieved if he could only discharge the load by belching or vomiting. Weakness, faintness, dizziness, and dimness of vision, made the slightest attempt to rise or move difficult. This formed the first stadium of the fever. Death seldom occurred in this stage.

After four or five days it passed off suddenly. Pain ceased, and the patient announced himself well. The pulse fell, the skin cooled, the active flush disappeared. But the danger, instead of being over, was just beginning. The stomach became irritable, rejecting every thing, and discharging larger or smaller quantities of a watery fluid, at first colorless; gradually presenting specks like snuff; then threads of mucus, like hairs, to which the dark specks adhered; then larger and darker particles like coffee-grounds; and, finally, the fearful black-vomit. The patient became restless, sighing, moaning, muttering. The dark color of the skin increased. The face, neck, chest, arms, and hands, became cold, shrivelled, and leaden-colored. In some cases the patient resembled one in the collapse stage of cholera. Pain and distress of different kind soon came on. The patient complained of burning heat in the stomach and bowels; the mind was gone, and in his delirium he would scream or groan in frightful fury, from the intolerable anguish of his suffering. Sometimes the power of perception seemed annihilated, and the patient unconscious of his own condition and utterly indifferent to every thing around him, even to the most ordinary amenities of life, or the most engrossing ties of human attachment. This condition characterized the second stadium of the fever, and usually lasted two or three days. The patient often broke down here, and, yielding up his strength to the violence of the disease, passed away quietly, or in a storm of mortal anguish.

The third and last stage was characterized by a continuance of many of the same symptoms, and by the addition of others. The black-vomit increased in quantity, and changed to a still darker hue. It became thicker and was often so putrid and offensive as to test the endurance of the most experienced nurses. The stomach would retain nothing, even a teaspoonful of any thing producing the most excruciatingly painful retching. The capillary circulation seemed almost arrested. The urinary secretion was often totally abolished; and this was a symptom after which no patient ever recovered. Nothing was so positively fatal as this symptom. The eyes and the skin became jaundiced, often in a few hours; and, in some cases, so intensely as to render the patient unrecognizable. Hæmorrhages, in some cases, occurred from the gums, tongue, nose, bowels, and uterus. The odor from the patient's body was offensive in the extreme. The tongue and mouth were covered with putrefying blood, and the breath offensive beyond description. About this period of the disease, though sometimes at an earlier stage, hiccough was often added to the dreadful array of symptoms that racked the tortured patient. Coming on in paroxysms, lasting a longer or shorter time, it would wear out the small remnant of strength still left him, appearing to lacerate and root up the last tendrils through which the sap of life was flowing. From this last stage, recoveries, though rare, were sometimes met with. When they occurred, the convalescence was slow and the relapses not unfrequent, as the consequence of imprudent exposure. When death occurred, the body was often putrid and offensive, before the citadel of life had fairly yielded to the enemy.

The treatment presented no new features and needs not, therefore, much length of detail. The large doses of quinine and calomel were freely used by several of the physicians. This treatment, having been employed and recommended by Surgeon Choppin, who was the first to arrive in Wilmington, was adopted by several of the resident physicians. Twenty grains of quinine with ten or fifteen of calomel were given on the first day, and the patient was made to drink warm teas; keep well covered under several blankets; the room closed, and the drinking of cold water strictly prohibited. On the next day ten grains quinine were given, and the same medicine continued in smaller doses till its effects on the system were evident. The sweating process and the abstinence from cold water were enjoined throughout the continuance of the fever.

The *veratrum viride* was used by Surgeon White, when the patients were seen early in the disease, with a view of controlling the pulse, and calomel freely given at the same time, in small and repeated doses.

Most of the other surgeons commenced the treatment by a gentle laxative, either with or without calomel; usually continuing this latter medicine in small doses for a moderate length of time; but none of them, as far as I know, with a view to produce salivation. The second and third day were usually passed in administering gentle diaphoretics, often combined with small quantities of quinine, and, at the same time, prescribing for any of the symptoms which seemed most urgent. The use of blisters over the abdomen, extending from the diaphragm to the pubis, was general. Hot mustard pediluvia, with cold applications to the head, were much employed during the fever stage. Hot mustard poultices to the chest, back, or loins, when these regions were painful, gave great relief. Croton-oil liniment was employed on the chest when the oppression and weight (or the sensation as if relief would follow vomiting or belching) were distressing.

In my own practice, I found a free use of the cold douche upon the head not only relieved the intense headache, and calmed the restlessness, but quieted the pulse, causing it to diminish in frequency, hardness, and fulness. It was administered by turning the patient's head and shoulders over an empty tub, at the side of the bed, and pouring a full stream of cold water from a pitcher, over the whole head, taking care to guard the ears and eyes. This was repeated at short intervals, and as often as the patient called for it. Throughout the disease light nutritive matters were allowed, and, as soon as the febrile symptoms permitted, the use of stimulants was added to that of nourishment.

To allay irritability of the stomach, a great number of remedies were suggested and tried, but, in the nausea and vomiting following the fever stage, and preceding or ushering in black-vomit, and the other formidable symptoms of the apyrexia, they were of little avail. Acid, alkaline, and neutral mixtures were tried. Musk, ether, and creosote failed. The functions of the stomach, in the worst cases, seemed totally destroyed, so that nothing could be digested or assimilated. Its peristaltic action seemed reversed, so that every thing that was put into it was instantly returned. The poison of disease had done its duty. Sometimes the work of destruction was not quite so thoroughly done. Small portions of ingesta were retained, and the stomach, like the other organs, seemed gradually to disenthral itself from the power of the poison. In such cases, champagne, in small quantities, brandy, jelly, beef-tea, and so on to other and more substantial nourishment, were retained and assimilated, and the dawn of hope would brighten up for the rescued victim.

It only remains for me now to give an idea of the extent of the disease and of its ravages.

The *Wilmington Journal* of the 17th of November gives the following statement of the progress of the fever, viz.:

There were, up to September	19..........	8 cases.	6 deaths.
In the week ending "	26..........	26 "	9 "
" " October	3..........	267 "	82 "
" " "	10..........	395 "	40 "
" " "	17..........	431 "	102 "
" " "	24..........	194 "	111 "
" " November	1..........	116 "	40 "
" " "	8..........	47 "	30 "
" " "	15..........	21 "	21 "
Up to date "	17..........	2 "	5 "
Total,		1,507	446 "

This exhibits a very great mortality. It is about one in three and a third; thus showing the virulence of the disease. About this percentage is usually met with in hospital practice where the patients generally come in late, and have fewer chances of life than in domestic practice, where they are seen early. Much of the unsuccessful result of private practice here must be attributed to the unfavorable circumstances attending the sick, such as want of good nursing, of articles required for the nourishment of the patients, bad cooking, and, by no means the least of all, the depressing effects of panic.

The population of Wilmington during the epidemic was variously estimated by competent observers at from 4,000 to 6,000. My own impression is, that 5,000 would not be far from the truth. That (5,000) would give about one case of fever out of every three and a quarter of the inhabitants, and one death out of about every eleven. But, if we remember that, of the population remaining in Wilmington, at least one half were negroes, and that negroes are much less liable to the disease than whites, it will appear that the rate of sickness and mortality among this latter class was much greater than what is stated.

ART. III.—*Statistical Report of Five Hundred Cases of Aural Disease.* By D. B. ST. JOHN ROOSA, M. D., Clinical Professor of the Diseases of the Eye and Ear, in the University of New York, Surgeon to the Brooklyn Eye and Ear Hospital, Fellow of the Academy of Medicine, etc.

(Read before the New York Academy of Medicine.)

Mr. President and Fellows of the Academy :

A distinguished writer on diseases of the ear, in urging his readers to record their cases, speaks as follows : "Nowhere is a thorough and purely objective observation of cases more necessary than in aural surgery, a branch of medical science which is very incomplete, and one which, we may frankly say, has been very inaccurately studied."[1] Some years of public and private practice, in which diseases of the ear have formed quite a large proportion of the cases observed and treated, have seemed to abundantly verify these words to the mind of your speaker.

With a view, therefore, to assist in filling up some of the deficiencies in our knowledge, and to aid in the settlement of some undecided points in otology, I have ventured to ask your attention to a report of five hundred ordinary cases of aural disease as they have been met with in private practice. While my remarks will contain very little that is rare, and perhaps nothing that is strictly new, they may serve to furnish an idea as to the general results of practice in this branch of our science and art.

The cases about to be presented were observed within a period of three years and a half, and are taken from my notebook without choice or omission. They have been arranged in the natural order of diseases of the outer, middle, and inner ear.

Deaf-mutism, however, and some cases of tinnitus aurium, unconnected with aural disease, have been assigned a separate place, for evident reasons. The report involves five hundred different persons.

---

[1] Treatise on the Diseases of the Ear. By Anton von Tröltsch, M. D. Translation, p. 550.

Among the five hundred cases, there were eight of circumscribed or furuncular inflammation of the external auditory canal. Seven of these recovered, one was seen but once, and the subsequent history is consequently unknown to me. The local treatment consisted of an early and deep incision of the swelling, and the subsequent use of warm water and leeches. I cannot now see that the leeches, indispensable as they are in other deeply-situated inflammations of the ear, were of much service in shortening the duration of this extremely painful affection. The early incision seemed to be of the greatest service. The warm water was usually very pleasant and soothing in its effects. It was used by continuously pouring it into the ear, but it did not always have the desired effect, and then poultices were applied. The nebulizer was also employed, by causing the spray to play into the auditory canal. I shall always regret that I did not sooner avail myself, in the treatment of painful affections of the ear, of Professor E. H. Clarke's aural douche, which, as is well known, is but an adaptation to the ear of Weber's nasal douche. The instrument maker now presents this little apparatus in such a simple and inexpensive form, that it may be recommended as one of the indispensables of nursery appliances. It is invaluable in quieting the earache of children.

All the cases of furuncle but one occurred in persons who were not in good general health. The exception was the case of a strong, middle-aged man. The differential diagnosis between furuncular inflammation and the diffuse form was not difficult. It was always easy to indicate the most sensitive portion by means of a delicate probe, used under a good illumination with the ear mirror or otoscope.

The cases of furuncle, resulting from the long-continued use of astringents in chronic suppuration of the ear, are not included among those just mentioned, but they were all primary affections. Some were very troublesome, on account of very frequent relapses. Two of them occurred in young ladies who dissipated very much in the way of late hours at the german and opera. It was only when the fashionable season was over that the treatment had any permanent effect.

There were eleven cases of diffuse inflammation of the external auditory canal, all of which recovered. In some of these, a very slight and probably evanescent irritation of the part, had been nursed into a severe and obstinate one by the use of ear-spoons, hair-pins, and stimulating applications.

In one case, that of a middle-aged man, there was a polypoid growth, springing from the membrana tympani. The membrane was supposed to be perforated, until the treatment had nearly ended, when it was found, after the growth had been completely removed by means of nitric acid, that the drum was intact, and that it had never been perforate. This same patient, after recovering from the affection, which remained confined to the one ear, caught cold in waiting his turn in a long line on election day, and passed through a similar inflammation of the other, without any relapse of the ear first affected.

The treatment of these cases consisted in careful cleansing of the parts by means of a syringe and a probe, about whose extremity cotton was twisted, and the subsequent use of an astringent, usually either the sulphate of zinc or alum. Leeches were frequently employed with great benefit, and warm water was constantly used. Blisters were rarely employed. No general treatment was usually required. The inflammation did not cause a perforation of the membrana tympani in any of the cases. I cannot now recall an instance, either from public or private practice, where a non-traumatic inflammation of the canal extended by suppuration into the cavity of the tympanum, although complication of an external suppurative process with a middle catarrhal inflammation is very common, as is well known.

There were five cases of eczema of the external auditory canal. The inflammation involved both canals in all the subjects. Four were cured. The result of the other case is unknown. In one of the cases, that of a middle-aged man, of very full habit, the cavity of the tympanum was involved in a catarrhal process, and there was very considerable impairment of hearing. In the remaining instances, after the crusts which plugged the canal were removed, there was very little impairment of hearing for ordinary conversation.

The treatment consisted in the daily cleansing of the canal and surface of the membrana tympani, and the use of sulphate of zinc, nitrate of silver, and similar agents, which were pencilled over the parts after the cleansing was effected.

Any success which may have been attained in the treatment of these inflammations of the outer portions of the auditory apparatus must be ascribed to the habit of personal attention to them. The carrying on of the treatment was never intrusted to the patients or to their friends. It is almost impossible for any person, except one who is able to examine the canal and membrana tympani, to know that the parts to be acted upon are thoroughly cleansed, and, of course, without such a cleansing, all medication is as useless as it would be on any other surface covered by abnormal secretion. I have seen several cases in which the proper treatment was prescribed, but in which it accomplished nothing, simply because the patient was unable to apply it in the manner just mentioned. They promptly yielded to personal attention on the part of the medical attendant.

There were two cases of foreign body in the external meatus, one a button, the other a bead, both of which were placed in the ear by the patients themselves, who were little children. These bodies were easily removed by the use of the syringe.

Forty-six of the cases are classified as inspissated cerumen. They occurred in forty-six different persons, who were all more than sixteen years of age, with one exception, a boy of fourteen. Forty-two were cured by the removal of the mass. It was usually found to exist in both ears, although the patient was not always aware of any trouble in but one. Inflation of the cavity of the tympanum, by means of Politzer's method, was often necessary in order to replace the drum in its normal position, and to restore the hearing power. Two cases were simply improved by the removal of the wax, although no other cause than its presence could be assigned for the tinnitus and impairment of hearing. In one case no improvement at all resulted from the removal of the cerumen, although it seemed to be the cause of the deafness.

It may excite surprise that these statistics do not agree with those of the late Mr. Toynbee.[1] This author reports one hundred and sixty cases, occurring in not one hundred and sixty persons, but in one hundred and sixty ears. In sixty the hearing power was completely restored, in forty-three it was considerably improved, in the remaining sixty-two, there was little or no improvement. It is possible that some cases were classified by Mr. Toynbee under the head of impacted wax, in which the accumulation was a mere coincidence. I have included only those in which there was a very considerable mass of hardened cerumen, which caused the usual symptoms of pressure upon the labyrinth, i. e., tinnitus aurium, impairment of hearing, and vertigo. Where the impacted wax, as is often the case, lay upon the remains of an ulcerated membrana tympani, or if, in a case of chronic catarrh of the middle ear, it had accumulated in consequence of the habit of pouring oils into the ear, I have not considered it as belonging under this head.

---

[1] Diseases of the Ear, p. 77.

In two of the subjects, great pain was a chief symptom. In one, that of a lady of about thirty years of age, ulceration of the drum was caused by the pressure of the mass. In another case, three sleepless nights were passed by the patient, while he was undergoing constitutional treatment for a neuralgia, which the use of the syringe relieved. In many instances, several sittings of some minutes' duration were required, before the mass could be removed.

In order to show the necessity of frequently examining the ear during the process of removal, I may state that two of the cases were correctly diagnosticated before they reached me, but the symptoms were not relieved, because a portion of the wax was left behind, in an attempt at its removal.

Nearly every one of these patients, without having a suspicion of what was the real cause of their sudden deafness, ascribed it to cold. On close examination, however, it was usually found that there was no definite time when they caught cold, but that the assigned cause was a purely theoretical one. Very few of the patients, who suppose that they are suffering from hardened wax, are really deaf from that cause.

The table embraces twenty-one cases of acute, simple, or catarrhal inflammation of the cavity of the tympanum, affecting one side; eighteen of these recovered, one was improved, in one case the result was unknown, and one patient died. I hesitate very much in assigning aural disease as the cause of death of this latter patient, and yet it was certainly the exciting cause of the fever of which he died. The case was that of a boy of nine, whom I saw twice, visiting him out of town at the request of Dr. Foster Swift, who was sent for, but who asked me to see the patient for him. When I first saw him, he had the usual symptoms of acute inflammation of the middle ear, i. e., severe pain, redness of the membrane of the drum, and deafness. These symptoms were relieved, with some difficulty, in about forty-eight hours, by the use of a leech, and the aural douche. The patient then, however, without perfect convalescence from his aural trouble, although he got to hear the watch on the affected side, ran into a typhoid condition, as I was informed by Dr. Swift, and he died in about five weeks from the date of my first visit, not having been out of bed from the date of the aural attack. Prof. W. H. Van Buren saw him several times, and, I am informed, was of the decided opinion that his death occurred from the poison of fever and not from the local troubles. There was no autopsy.

In another case the rare phenomenon of pulsation of the imperforate membrana tympani was observed by myself and Dr. Rider, of Rochester, N. Y., who was in my office at the time patient presented himself, a man sent me by Prof. D. Tilden Brown. The upper segment of the membrana tympani rose and fell with each pulsation of the heart.

There were thirteen cases of the same form of disease as that now being noticed, which occurred in both ears at the same time; eleven of these recovered and two were improved.

The treatment pursued consisted in the prompt and free use of leeches, the constant employment of warm water, and, in adults, the internal use of opium *pro re nata.* It was seldom that the latter agent was required. In children, leeches were employed but once. The warm water was usually sufficient to lull the pain. As soon as the pain was alleviated, in adults the Eustachian catheter was introduced, and an air-bath given to the ear. In children, Politzer's method of inflating the cavity of the tympanum was employed.

We next come to those cases which are by far the most numerous in aural practice, those known as simple chronic inflammation of the middle ear, chronic catarrh of the middle ear, catarrhal deafness, or chronic myringitis. Of the 500 persons embraced in this table, 245, or very nearly 50 per cent., were victims of this disease. It may be justly urged against this classification, that it is too general. Writers on otology divide these cases into three or more different forms: tubal catarrh, true or moist catarrh of the middle ear, and sclerosis of the mucous membrane of the middle ear. I must confess that I am not able, from my notes, to make a correct division into these forms, and I am not prepared to admit the existence of a tubal catarrh, that is, an inflammation of the Eustachian tube without any affection of the cavity of the tympanum, although there are undoubtedly many cases in which the tubal affection predominates. True catarrh of the middle ear, or cases in which the pharynx is relaxed and secretes excessively, where there is great variation in the amount of the impairment of hearing, are certainly, however, to be distinguished from those cases in which the pharynx and tube give few or no indications of the trouble which the altered inclination of the membrana tympani to the auditory canal and its abnormal color plainly show.

I have, however, been obliged to classify together the 245 cases of non-suppurative chronic inflammation of the middle ear. Of those, only eleven were cured, that is to say, the hearing was perfectly restored, and the tinnitus aurium removed. Only one of the cases occurred in an adult, a male.

Seventeen were much improved, that is, the hearing power was rendered sufficient for all ordinary avocations; fifty-six were improved. It is thus seen that about one in three was benefited by treatment. Ninety-six were unimproved, although some treatment, more or less thorough, was undertaken. Sixty-four underwent no treatment at my hands, from different causes. In some, the prognosis was hopelessly bad, and abstinence from local medication was advised. In others, the patients did not choose to take the chances of treatment, or were unable to do so, on account of non-residence in New York, and inability to remain here. I am not able to give any definite idea as to how many of these sixty-four would have been benefited by a local treatment. Probably very few, since the most of them were the cases of a former generation, making their periodical visit to a new aspirant to aural practice. The great number of this latter class of cases is evidence of the great neglect of diseases of the ear, and of the want of exactness of opinion, in the profession, as to the nature and prognosis of aural affections.

Patients with sunken eye-balls, or atrophy of the optic nerve, soon ascertain the hopelessness of their visual condition, cease to visit oculists, and settle down into blindness as resignedly as may be, but many of those who have been unable to hear ordinary conversation for twenty years, whose drum membranes are immovable, opaque, and sunken, still wander about to consult some new authority, hugging the delusive phantom that a miracle is to be wrought, and their deaf ears unstopped.

The noise in the ears is usually spoken of, by the sufferers from the disease under consideration, as the most troublesome symptom. There are exceptions to this, however. One lady, of poetic temperament, said she enjoyed the different variety of sounds in her ear, and one other patient, a man, said that he cared nothing about them, that he was in fact somewhat amused by them.

One of the patients, who was very disconsolate about his impaired hearing, and very much disturbed by the tinnitus, after threatening to do so, actually shot himself, in order, as he thought, to end his misery. The patient was a gentleman of forty years of age, who had been gradually becoming deaf for fourteen years. When I saw him, he still heard ordinary conversation, but with difficulty, and he was suffering from tinnitus of a very annoying character. I was unable to give him much, if any, encouragement as to an improvement, and he left my office very disconsolate. He was a gentleman of culture, a professor in one of our institutions of learning. About seven months after I saw him, he shot himself through the head, and, as I have good reason to believe, on account of the tinnitus aurium. The treatment of these cases was chiefly local in its character. The Eustachian catheter was used as a vehicle for forcing common air, vapors, and fluids, into the cavity of the tympanum, or as an irritant to the mucous membrane. Its use was supplemented by Politzer's method. In most of the cases, common air did quite as well as the vapors. Latterly, but in comparatively few of the cases here presented, I have injected a solution of the sulphate of zinc through the catheter.

The pharynx and mouths of the Eustachian tubes were cleansed by means of Weber's nasal douche, and the posterior nares syringe. I have recently abandoned the former method in aural disease, on account of the dangerous results to the ears from its use, and I have elsewhere reported a case illustrating this point.[1]

Gargling was always advised; counter-irritation was very rarely employed; mercury and iodide of potassium were only used when there was a syphilitic diathesis.

Turkish and Russian baths were employed in several cases, but without any decided results.

In public practice, while one of the medical officers of the New York Eye and Ear Infirmary, I made a full and fair trial of mercury, iodide of potassium, and counter-irritation in chronic affections of the middle ear, and I was unable to satisfy myself that they were of any avail, except when a diathesis existed, and I have, therefore, ceased to prescribe them.

The scope of this paper does not allow me to speak of these cases with any great detail, but I hope I may be pardoned for dwelling for a moment on some of their more salient features. The table to be presented will show that the greater number came under observation when the morbid process on which they depended was far advanced.

The most of them had no rational treatment during their entire course. Abandoned by the regular profession, they took refuge among charlatans, who removed "osseous tumors," and hardened wax, and then "restored the natural secretion," who poured drops, of mysterious virtue, in the ear, or used other prescriptions as rational as those quoted by Sir William Wilde in his famous treatise,[2] namely, "a bit of wool, taken at a particular time and under particular circumstances, from the left foreleg of a six-years-old black ram," or one which the same author mentions as having been recommended, by a London hospital surgeon, as a cure for deafness: "the finest curled wool on the sheep's head, carefully cut with scissors, and washed in hot water," and he adds, as if inspired by the idea that our greatest advance in aural medicine must be of Teutonic origin, "the best wool is that procured from a small German sheep."

---

[1] Knapp's Archives for Ophthalmology and Otology, No. 1.

[2] Aural Surgery, p. 42.

These patients have often also been subjected to the so-called use of the Eustachian catheter, handled in such a way as to excite bleeding and pain, but not to reach the tube, and from employment of which they have been led to the most extravagant hopes, which have been disappointed. Add to all this, the fact that they have heretofore paid enormous fees in advance, and we have an idea of the amount of confidence with which such patients approach a regular practitioner who assumes to treat the ear.

Very many cases of chronic aural inflammation are insidious in their origin. They begin without pain, and it is often not until the patient is quite deaf that he discovers that his hearing is impaired at all. Close examination, however, will often detect a period in the history which may be considered as a starting-point; for instance, a "cold in the head," in youth, which left the patient "a little dull of hearing," or which disappeared without treatment, to return again at frequent intervals; continued fever, which renders the subject deaf for a time, but from which he recovered; the excessive use of quinine, frequent ear-aches in childhood, etc. It is possible and probable that many of these supposed recoveries were never complete, but that some impairment of hearing remained.

We all possess, so to speak, a certain amount of superfluous hearing power, the loss of which is not readily perceived by a patient or his friends, unless a comparative examination is made. Every case of temporary impairment of hearing should be critically examined after it has run its course, in order to see if the hearing power is normal. In Politzer's method, every practitioner has at his command the means, in many cases, of preventing the loss of any of this superfluous hearing power. By employing it, we may obviate the consequences of a future attack, in which, if the superfluous hearing be already gone, some of the essential amount will be lost, and the patient become obviously deaf.

It is not to be denied, however, that there is a form of chronic aural catarrh, to which it seems to be almost impossible to assign any cause, and which advances with slow, but certain, steps to the end of complete deafness. The absence of subjective symptoms, the great amount of tinnitus, have led many to the idea that these were cases of nervous deafness. Wilde showed long ago, that they were inflammatory in their general nature, but, when well under way, we seem to have no adequate means of retarding their progress. Dr. Agnew, of New York, has aptly compared them to certain forms of choroiditis. Future study and experiment will undoubtedly aid us in more exactly determining their nature, and I venture the prediction that we shall yet have lenses, for the refraction of rays of sound, that will alleviate some of the errors of audition which are now beyond our aid.

H. Schwartze, of Halle,[1] has reported at various times one hundred and eleven cases of this affection, of which nine were cured, forty-nine improved, and fifty-two were unimproved or not treated.

Moos,[2] of Heidelberg, reports one hundred cases, of which seventeen were cured, sixty-four improved, and nineteen unimproved.

These cases, which, as is seen, show a larger percentage of cure and improvement than those I have presented, were chiefly treated in hospitals or infirmaries—a much more favorable place for the successful management of chronic conditions than the consulting-room of a private practitioner. Many of the patients who consult him are unable or unwilling to spend the necessary time away from their homes, for the purpose of being treated, and consequently no trial is made, or a very insufficient one.

There were, in the five hundred cases, eight of acute suppurative inflammation of the middle ear, affecting one side only. Six of these recovered, two were consultation cases, in which the result is unknown to me. Of the same form of disease occurring on both sides, there was only one case which was cured.

---

[1] Archiv für Ohrenheilkunde, Bd. I., II., III, *passim.*

[2] Klinik der Ohrenkrankheiten, p. 163.

It will be understood that, in all these cases, there were ulceration and perforation of the membrana tympani, which were completely healed, and that there was impairment of hearing, which was relieved.

Grave as this affection is, when left to itself, or improperly cared for, it is a very satisfactory one to treat. The use of leeches to subdue the inflammation and relieve the pain, of warm baths to the ear for the same purpose, of the catheter, Politzer's method, and the syringe to clean out the auditory canal and the cavity of the tympanum, of a gargle to keep the muscles of the tube in action, and of an astringent to act upon the proliferating mucous membrane, almost invariably produce the most favorable results. In the greater number of instances the treatment occupied but a few days, at the most a few weeks. In one case, that of a lady, to whom I was sent by Prof. Barker, the treatment lasted for four months. This case was greatly aggravated by furuncles in the auditory canal, and the general condition of the patient was very bad. Finally, however, the membrana tympani was restored, and the hearing became very good.

It is this disease—suppurative inflammation of the middle ear—which, occurring in infants or young persons, and being unrecognized, until the ossicula are swept away, does so much toward filling our deaf and dumb asylums. Voltolini has endeavored to show that many cases of affections of the labyrinth, occurring in infants, are mistaken for meningitis.[1] I am convinced, from some considerable attention to the objective appearances in deaf-mutism, with a careful consideration of the histories furnished by parents and friends, and also by the study of the histories of patients suffering from chronic otorrhœa, that many children are supposed to be affected with cerebral disease, when it is only the ear which is at fault.

Warm water poured into the ear will often assist in clear-ing up the diagnosis between cerebral and aural disease. I have seen almost magical results in young children from this simple procedure. Since the determination of the question is somewhat difficult, even when the ear is most carefully examined, it is certain that mistakes will be made if it be not once considered as a possible source of the symptoms. It is greatly to be regretted that our works on the diseases of infancy and childhood give no more adequate hints than the most of them do, in this most important matter. Infantile earache is very common and distressing, as every mother will testify, and its consequences are often deplorable.

---

[1] Monatsschrift für Ohrenheilkunde, No. 1.

There were forty-five cases of chronic suppuration in the cavity of the tympanum, affecting one side only. Five of these were cured, that is, the discharge was stopped, the membrana tympani healed, and the hearing improved. Ten were much improved, nineteen were improved. In nine the result of treatment is unknown, and two died. There were sixty-six cases where the suppuration existed on both sides; two of these recovered. Fifteen were much improved, twenty-seven were improved, nine were unimproved after considerable treatment. The result is unknown to me in eleven cases. It will be seen that a little more than one-fifth of all the five hundred were cases of suppurative inflammation. Of the deaths, four in number, two were children, one ten, the other sixteen years of age; two were adults, one sixty, the other about forty-five. The children died of cerebral abscess, as I am informed by the friends of the patients. One of the adults was a patient of Dr. Agnew's, whom I saw many times with him, whose case has been fully recorded in another place.[1] He died of cerebral disease, consequent on the occlusion of the external auditory canal by an exostosis. The other adult died of Bright's disease, as I am credibly informed. His symptoms first appeared in connection with suppurative inflammation of the ear, from the effects of which he never fully recovered. The membrana tympani healed, but the hearing was not improved, and pain referred to that side of the head continued at intervals until the positive symptoms of uremic poisoning occurred, which were verified by the examination of the urine, made by his physician. The head was not examined at the *post-mortem*, but the kidneys were found to be diseased.

---

[1] Troltsch, Diseases of the Ear, American translation, pp. 131 and 471.

It is highly probable, although by no means certain, that the intense pain occurring at intervals, and which was supposed by me to be a consequence of the suppurative inflammation of the middle ear, which destroyed the hearing power on that side, was due to the influence of the disease which was afterward developed, and the existence of which was verified by the *post-mortem.*

The patient was sixty years of age, and the existence of Bright's disease was not suspected until some time after the occurrence of the aural inflammation, with which it seems to have been connected.

In a paper read before the Academy, on April 1, 1869, entitled "On the Etiology of Bright's Disease, with Remarks on the Prophylaxis," by Gouverneur M. Smith, M. D., the following very suggestive passage occurs, which has served to recall the case just mentiond very vividly to my mind,[1] and which I trust will lead to important investigations:

> "Before dismissing the subject of these protean lesions, I would call attention to one which occasionally occurs, and to the existence of which I do not remember to have heard allusion. Deafness is sometimes developed during the course of the disease. This symptom, when transient, and accompanying a lethargic condition of the patient, has been properly attributed to uræmia. The same symptom, however, in conjunction with others, aural in character, may be permanent, in which case I ascribe their occurrence to a peculiar lesion of the ear; a lesion peculiar in that it holds a relationship to the nephritic disorder, and is not, so to speak, of accidental origin.
>
> Is it not proper to view the association of the aural and nephritic lesions in the same light as we regard the occasional coexistence of the ocular and renal?
>
> Bright's retina is now fully recognized by the profession. It sometimes happens, as we are all aware, that patients, suffering with defective vision, on applying for relief, are informed for the first time that they have a renal disease.
>
> I would ask the attention of those surgeons who are making aural affections a special study, to the opinion just expressed, in reference to a Brightian lesion of the ear.

---

[1] Dr. Smith's paper will appear in volume III. of the Transactions of the Academy.

> It would seem desirable, when treating patients with obscure auditory diseases, to examine their urine both chemically and microscopically—a latent Bright's disease may thus be detected and the cause of the aural malady thus be explained."

Schwartze[1] has lately reported a case in which hæmorrhage into the cavity of the tympanum occurred during the course of Bright's disease.

Of seventy-six cases of cerebral abscess recorded by Dr. Gull,[2] twenty-seven undoubtedly resulted from aural disease, many more by far than from any other one cause. In spite of facts like these, so accessible to the profession, carefully recorded cases of cerebral abscess may be read, in which there is no intrinsic evidence that the ear was once examined during the progress of the case, and in some instances it is positively stated that it was not. In scarcely any, except those recorded by specialists, is there any exact examination of the ear.

In three cases hyperostoses existed on the auditory canal, being, as I have shown in another place, the result of local irritation, and not of any diathesis.[3]

The treatment of these cases of suppuration in the ear is so well recognized that it scarcely needs mention. The profession everywhere are now convinced that an attempt should be made to check the ulcerative process, inasmuch as its continuance is dangerous to life. Old persons, with a purulent discharge from the ear, seem to be rare, judging from my observation. The inference from such a fact is obvious. A life insurance company would certainly not be justified in insuring the life of a person with chronic otorrhœa, and in England no such risks are taken.

Guthrie, in his lectures on military surgery, says, of injuries of the head affecting the brain, that "they are difficult of distinction, doubtful in their character, treacherous in their course, and for the most part fatal in their results." We may say of a chronic suppuration in the ear, that, while it is not difficult of distinction, it is often doubtful in its character, treacherous in its course, and fatal in its results.

---

[1] Archiv für Ohrenheilkunde, iv., B. 1, 4.

[2] Reynolds's System of Medicine, Vol. ii., p. 557.

[3] New York Medical Journal, March, 1866.

I cannot forbear quoting a few sentences from Wilde's graphic description of the results of this disease, which is often so lightly regarded: "But this is not the worst—the discharge may not then cease; the ulcerative process may then, or at any previous or subsequent period, *during the continuance of the discharge*, suddenly and rapidly extend; the membrana tympani is destroyed; the bony walls of the meatus and the tympanum become carious; the ossicula are lost, or are rendered incapable of performing their functions; the disease spreads into the mastoid cells, and the whole of that process of the temporal bone becomes carious; fistulous openings occur behind the cartilage; a thin, brownish, highly-fetid discharge ensues; the auricle frequently assumes a bluish, livid appearance; the motor portion of the seventh pair of nerves becomes affected, or absolute lesion of its substance takes place; the mouth is first observed to be slightly drawn toward the opposite side, and paralysis of one half of the face quickly follows; the palpebræ, remaining apart, give the globe of the eye a peculiarly prominent, staring appearance; the cornea, from want of its natural covering, and the injurious effects of the atmosphere, abrades and ulcerates; the ala nasi becomes flattened; the mouth is much distorted (particularly if in a child when it cries), and the whole cheek and side of the face look fuller. Hearing is in most instances completely lost on that side; the general health frequently sinks under such accumulated misery; and, even if recovery takes place, it is after months of suffering, and always with deformity. At times, and that not unfrequently too, the disease spreads still farther to the petrous bone; the brain and its membranes participate in this unhealthy action; irritation, fever, rigors, and cerebral symptoms of an insidious nature, follow, and delirium, convulsions, coma, and death, ensue; or the patient may die suddenly of hæmorrhage from an open carotid. And yet this is the disease thought so lightly of by the public and the profession, and described as "only a slight running from the ear."[1]

Fifteen cases were classified as affections of the labyrinth. In none of these was any improvement effected by treatment.

---

[1] Aural Surgery, p. 398.

As is well known, affections of the middle ear often extend to the labyrinth, but the cases here alluded to were considered as primary affections of the auditory nerve.

Ten of the patients presented were deaf-mutes. Inasmuch as I have already enjoyed the privilege of speaking at some length to the Fellows of the Academy on this subject, I refrain from any comments on these cases, except to say that no medical treatment was advised.[1]

There were three cases of tinnitus aurium, without the slightest impairment of hearing or any lesion in the auditory apparatus which I was able to recognize. They all occurred in persons who were overworking the cerebrum. Desistance from excessive occupation and change of scene were advised, but I am unable to give any account of the progress of the affection in these subjects.

Finally, there was one case presented for my examination, in which there was no disease of the ear, or impairment of its function. The patient was a lady who was in great dread of deafness, and who evinced a laudable desire to have her ears attended to in time.

There were 297 males and 203 females in the cases thus presented. The following table will show the duration of the cases before they came under my observation:

One year or less,			177	or about	35	per cent.
Between	one and two	years,	35	“	6.1	“
“	three and four	“	25	“	5	“
“	four and five	“	19	“	$3\frac{4}{5}$	“
“	five and ten	“	107	“	21	“
“	ten and twenty	“	82	“	16	“
“	twenty and thirty	“	36	“	7	“
“	thirty and forty	“	12	“	$2\frac{2}{5}$	“
“	forty and fifty	“	4	“	0.8	“
	fifty	“	2	“	0.4	“
	seventy-five	“	1	“	0.2	“

There are many obvious deficiencies in this report, yet I trust it may have a certain value in indicating what are the needs in aural therapeutics.

I may now present the whole table, and thus conclude this paper.

---

[1] Remarks on the Etiology of Congenital Deaf-Mutism, made before the New York Academy of Medicine, February, 1868.

Statistical Report of five hundred Cases of Aural Disease, occurring in Private Practice, and within a space of three and a half years.

DISEASE.	WHOLE NO.	CURED.	MUCH IMPROVED.	IMPROVED.	UN-IMPROVED.	UNKNOWN.	DIED.
Furuncular inflammation external canal	8	7	..	..	..	1	..
Diffuse inflammation of external canal	11	11	..	..	..	..	..
Eczema external canal	5	4	..	..	..	1	..
Inspissated cerumen	46	42	..	2	1	1	..
Foreign body in external canal	2	2	..	..	..	..	..
Simple acute inflammation of cavity of tympanum (one side)	21	18	..	1	..	1	1
(Both sides)	13	11	..	2	..	..	..
Simple chronic inflammation of the cavity of the tympanum	245	11	17	56	96	64	1[1]
Acute suppurative inflammation, cavity tympanum (one side)	8	6	..	..	..	2	..
(Both sides)	7	1	5	..	..	1	..
Chronic suppurative inflammation, cavity tympanum (one side)	45	5	10	19	..	9	2
(Both sides)	66	2	15	27	9	11	2
Disease of the labyrinth	9	..	..	..	9	..	..
Deaf-mutes	10	..	..	..	10	..	..
Tinnitus aurium without deafness	3	..	..	..	..	3	..
Hysteria	1	..	..	..	..	1	..
	500	120	47	107	125	95	6

Art. IV.—*Circumcision.* By A. B. Arnold, M. D., Baltimore, Md.

During the last nineteen years, I performed the operation of circumcision, as practised among the Israelites, not less than eight hundred times. This extensive experience enabled me to gather some noteworthy facts and observations. It will perhaps be not uninteresting to introduce their statement by a brief account of what is at present known, or conjectured, in regard to the origin and purpose of this species of mutilation, which prevailed to a great extent in ancient times among numerous tribes and nations, and is yet practised by over two hundred millions of people. No apology, I hope, will be deemed requisite for trenching thus apparently on religious grounds, in view of the fact, that circumcision is a surgical procedure, and constitutes therefore an item of medical literature. I have availed myself, accordingly, of the many contributions, which contain much curious information on this subject.

---

[1] Committed suicide on account of tinnitus aurium.

Herodotus alludes to the customs of circumcision among the Egyptians, the Colchicans, the Ethiopians, the Phœnicians, and certain tribes of Syria. On the authority of Clemens of Alexandria, it is reported, that Pythagoras had to submit to circumcision before he was allowed to be initiated into the mysteries of the Egyptian priesthood. It is remarkable that while the Mohammedans practice circumcision as a religious observance, no command is contained in the Koran to make this rite obligatory. This evidently shows that, among the Arabians, with whom the Moslem religion originated, the usage of amputating the foreskin had acquired a sanction, which not even a radical change of religion could weaken in the least. The Bible informs us that Abraham was circumcised, in obedience to divine command, and yet it is singular, that Scripture is silent in regard to the question, whether the patriarch, who was then ninety-nine years of age, circumcised himself, or was circumcised by some other person. The context in which this biblical passage occurs, and argument from the verbal construction of the language employed, suggest the inference, that the practice of circumcision in Abraham's time was already an established custom. Be this as it may, it must be assumed that the descendants of Abraham circumcised their male children on the eighth day, under the conviction of discharging thereby a religious duty. In the course of time, as shown by the scriptural narrative, the Israelites considered the retention of the foreskin as a badge of infamy. A curious instance is related, in the life of David, which illustrates the existence of a barbarous custom in connection with the obnoxious genital appendage. During the time that David figured as a dashing guerilla chief, in the employment of the king of Israel, he demanded in marriage the daughter of his royal master. This request was granted, under the condition that the young hero bring one hundred foreskins of one hundred Philistines. David, like a true lover, and cavalier, brought double the number of the specified trophies, but Saul failed to keep his promise.

Circumcision attracted also the attention of celebrated heathen writers, and a strange circumstance brought this operation likewise under the notice of some of the most eminent surgeons and physicians of antiquity. Tacitus ascribes the custom of circumcision, among the Asiatics, to the design of preventing certain disorders to which the inhabitants of hot countries are said to be peculiarly liable. This opinion is shared by Niebuhr, who tells us, in his travels, that the prepuce in oriental regions is apt to be affected by boils and carbuncles. Strabo assigns a similar reason for the ablation of the clitoris of Egyptian girls. A number of modern writers conjecture, that Moses instituted the rite of circumcision as a prophylactic measure against congenital phymosis, paraphymosis, and the formation of concretions beneath the prepuce. This is hardly probable,[1] for it is difficult to believe that a painful, and sometimes a dangerous operation, should have been adopted by a whole nation, for the mere purpose of avoiding a few rare and not serious local complaints, to which the possessors of Palestine were not more disposed than other people. The learned Maimonides thinks that circumcision has the effect of lessening the amorous propensity: "superfluus tantum appetitus cœundi diminuitur." There are some biblical scholars, who have advanced the opinion, based on the results derived from the comparative study of kindred religious systems, that circumcision owed its origin to the beneficent intention of substituting a milder usage for the horrible practice of human sacrifice.[2] It is highly probable that previous to the establishment of the Mosaic polity, all the Semitic tribes were guilty of this abomination, and the Pentateuch contains yet the regulation in what manner every first-born male child, which was to be devoted to Jehovah, shall be released from this obligation. The query arises, however, why the external genital organ of the male was selected for the mark of the Abrahamic covenant? Some of the learned men have found no difficulty in solving also this problem. The ancient Egyptians and the Syrian tribes inhabiting portions of Asia Minor, symbolized the creative or generative power of the Deity by crude images of the pudenda. Herodotus tells us that, when he travelled through Syria, he saw a number of such ill-shaped things (phalli) erected on hills, and in groves. The foreskin was imagined to be an obstruction to the functional activity of the male organ, and was therefore removed as an inappropriate appendage. This seems to be indicated by the Hebrew word *orel* (prepuce), which is used in the sense of impeding or checking.[1]

---

[1] See Autenrieth's Dissertation on the Origin of Circumcision among Barbarous and Semi-barbarous Nations.

[2] Vatke. The Old Testament. Movers. The Phœnicians.

At a later period of Jewish history, when the successors of Alexander, and afterward the Romans, had subdued the Holy Land, they introduced the elegant pastimes and exercises of the gymnasium, and the arena, which found much favor among the young Hebrews. On occasions when the Jewish gladiator or athlete had to strip like the rest, to take part in the performances, he would be subjected to the taunts and jeers of the heathen spectators, on account of his bodily deficiency. The admirer of Horace will probably remember the lines in *Judæus appela*, where the facetious poet wittily alludes to the *curti.* In order to remedy this shortcoming, the high-spirited Jewish youths soon found means of fashioning for themselves new foreskins. The celebrated Roman surgeon, Celsus, has transmitted to us the manner of chirurgical procedure, by which this change was accomplished. He directed to divide the margin of the preputial vestige, where it is attached around the fossa, so that the duplicature of skin compassing the prepuce may be expanded and lengthened. Galen advises to stretch the elastic tissue of the remaining portion of the foreskin by long-continued manipulations, and to fasten its free edge to the glans near the meatus. Surgery conferred thus a great boon on the pious young Israelite, and more especially since, after the final overthrow of the Jewish nationality, under the Emperor Hadrian, very stringent laws were enacted against the rite of circumcision.

Among a large number of rules contained in the Talmud, respecting circumcision, the following are noteworthy: If a father lost two boys by circumcision, he was absolved from having the succeeding full brothers circumcised. Sickly and feeble children, or those whose skin is unusually red, or yellow, are exempt from the operation. The advice of a physician is necessary whether a child is able to undergo the operation at the stated time.

---

[1] G. Brecher, M. D. The Circumcision of the Israelites. Vienna, 1845.

With regard to the persons who officiated as operators, it may be inferred from passages of the Bible, and the Talmud, that women, and even the mother of the candidate for circumcision, undertook the task. Josephus informs us that a physician was preferred to any other person. The Justinian code prohibits any physician from circumcising a Roman citizen. During the middle ages, the services of a Jewish surgeon or barber were employed for the purpose, but a Gentile surgeon was also allowed to operate, when none of the Hebrew persuasion could be procured. In modern times, non-professional persons of the Jewish church, almost exclusively practise the operation, and consider it a pious act, and accept no remuneration, but, in many European States, a physician must be present, to watch the proceedings, except the officiating person be a surgeon of the Hebrew faith.

The operation of circumcision is a very simple affair, and, if properly performed, ought to be finished in less than a minute's time. In the hands of non-professional persons, the operation looks, sometimes, formidable enough, owing in some measure, to the accompanying ceremonial, but more especially to the remnants of the vicious surgery of a past age. The most objectionable feature is the squirting of wine on the fresh wound, followed by the sucking of blood with the mouth. This procedure, technically called *mezizah*, has recently found many and influential opponents within Jewish communities, and has even been interdicted by Rabbins of high authority. I have never imitated this practice, which, I am happy to say, meets the approval of American Israelites of this city, and received the sanction of the late pious and learned Rabbi, Abraham Rice, who was then at the head of one of the most numerous and orthodox Jewish congregations of this country.

The apparatus used consists of a two-edged knife of considerable size, rounded off at the point, where it has a dull edge. Perhaps a pair of scissors would be preferable, but this innovation has not yet been attempted by any one. I use a small scalpel, as the convex blade offers some advantage. A guard, or shield, composed of a plate of silver or ivory, having a slit in the centre which runs longitudinally for compressing the prepuce, is now in general use. The operator keeps the nails of both his thumbs sharply pointed. A glass of water and a narrow strip of lint complete the preparation. The person who holds the child sits on a chair, his feet resting on a low stool, and approximates his knees. A small pillow is placed on his lap, on which the child is laid on the back, with the head directed toward the left side of the assistant, who carries his right hand under the knees of the child to steady them by his thumb, his left hand passes over the left shoulder of the child, by which he keeps the trunk in position. The operator stands at the feet of the child, and seizes the prepuce between his left thumb and index finger, and draws it upward. He then slides the guard from above downward, and from right to left, over the prepuce, which is constricted between the fingers and the glans. The knife is now held outside of the guard, and with one cut, or perhaps two, the foreskin is severed. Immediately the wounded cutis of the penis retracts behind the fossa, and occasionally to such an extent, that the penis acquires the appearance of having been completely skinned. Only a small portion of the inner lamella of the prepuce is usually cut away, and, being of a less elastic nature, is found to cover a part of the glans. Sometimes it remains intact, and may still cover the entire glans, and even project beyond it. If this be the case, it ought to be removed by a short sweep of the knife, as it would otherwise dangle about in shreds after the parts have healed. Generally, however, the glans is exposed sufficiently to allow of the next stage of the operation. This consists of the laceration of the inner fold of the prepuce, and is done for the purpose of divesting the glans of the remaining portion of the foreskin. After the guard has dropped, or has been removed, the nail of the left thumb is introduced between the inner lamella of the prepuce and the glans, and held tightly with the aid of the left index finger, and is then gently drawn upward. The nail of the right thumb is introduced in a similar manner, but opposite and nearly in contact with the other nail, so that, in conjunction with the right index finger, the free margin of the circumcised skin is torn on its superior side to near the corona glandis. Very little blood escapes, and nothing further is required to be done than to wrap a narrow strip of lint around the wound, which is kept *in situ* by the agglutination of the blood, and protected from friction by pinning the diaper in the usual manner. The wound heals rapidly, although a slight tumefaction of the parts is frequently observed on the next day, when the dressing may be safely removed and replaced by a thick layer of the common infant powder.

In the vast majority of cases, which present themselves for circumcision, no difficulty is encountered which would require any other management but what has thus been described. There occur, occasionally, certain deviations from the normal type of the prepuce, for which the operator must be prepared. The most frequent defect is a shortened, hard, and puckered condition of the preputial orifice. This offers some difficulty in seizing the parts securely with the fingers. It is my practice, in these cases, to employ a large dressing forceps, by which the small prepuce can be easily drawn away from the glans, and thus prevent the wounding of the latter, of which I know instances. I have also come across a few bungled cases of circumcision, where, owing to the same cause, an elliptical portion of the foreskin had been cut off, and the head of the penis forced through the opening thus made.

Cases are also not rare, in which the orifice of the inner fold of the prepuce is surrounded by a hard, broad seam, that opposes its easy laceration. It is my invariable rule to remove this indurated portion with the knife. I have been called to attend cases where the violent attempt of lacerating such a tough tissue had produced a rent, causing much swelling, and a deplorable amount of suffering.

A fault of an opposite kind is sometimes committed—due either to the timidity of the circumciser, or the concealment of the parts by the blood—where the inner lamella is only partially torn, and is kept on the stretch by the protruding head of the penis. I recollect, that I was once hastily summoned to stanch the blood in a circumcised child, which the officiating person was unable to check. The child was fearfully blanched, and had refused to nurse for the last six hours. On inspecting the wound, I found the state of things just mentioned, and, on extending the laceration, relieved the child. Troublesome bleeding and suppuration are not unfrequently caused by the laceration of the frænum præputialis.

But the most dangerous source of excessive loss of blood in circumcised children is, the existence of the hæmorrhagic diathesis. I remember a family in this city, one of whose children barely escaped with its life, on account of such an unfortunate peculiarity. In two of the children of the same parents which I had circumcised, I found great difficulty in controlling the hæmorrhage. The third child was circumcised by a non-professional person, as the family labored under the impression that the profuse bleeding was owing to my want of skill. Eight hours after the operation, I was sent for, in a great hurry, to render my services. I found the infant in a very precarious condition, as much time had been lost by various appliances to stop the blood, which seemed to ooze from every part of the wound. A neighboring physician had been called in, who unavailingly cauterized the bleeding surface with a solid stick of nitrate of silver. I gave the child a few drops of brandy, in milk, and proceeded to employ the means which had proved successful with the other children. This consisted in wrapping, somewhat tightly, a narrow strip of lint, in successive turns, around the penis, commencing at its root, and frequently repeating these turns around the wounded part, where it formed a kind of cap, and then secured the dressing by numerous tours of cotton thread. The support and pressure exercised by this compact spiral of lint and thread answered the purpose fully, and probably saved the child's life. But, for a long time afterward, the great pallor of its skin, lips, and gums, showed the fearful effects of the drainage of blood. It ought to be mentioned that these cases occurred at the time when the perchloride and persulphate of iron had not yet been introduced into practice. These preparations I have since used with uniform success in obstinate bleeding from circumcision.

Twice I have rendered assistance in a serious condition of the penis, verging on gangrene, caused by a few linen threads which had strangulated the fossa near the corona glandis, and obstructed the passage of the urine. These cases bore a striking resemblance to paraphymosis, and I must confess that the detection of the cause, which puzzled me much, was still easier than its removal. The parts were tumefied, and deeply congested, and the glans penis, especially, appeared almost black. I ordered a warm bath, in which the little patient remained for some time; and, after repeated attempts with a blunted tenaculum, I succeeded in raising the softened threads from their imbedded position, which gave way on slight traction. No bad consequences followed in these instances; but a similar fortunate termination did not take place in a few other cases of a like nature, one of which came under my notice when it was too late for medical aid to be of any service. Some of the circumcisers, namely, pursue the reprehensible practice of using small pledgets of linen, having a small hole in the centre, which they forcibly strip over the glans penis, and lodge in the fossa, for the purpose, as they allege, of preventing the return of the preputial vestige over the glans. These pieces of linen, or tropeles, as they are called, are allowed to remain in place until the third day, and sometimes longer. Others are in the habit of removing these tropeles daily, and replacing them by new ones, which causes agonizing pain to the little sufferers. If it happen that these unyielding bands of linen contract, and cannot well be removed, without screaming and struggling on the part of the child, they are allowed to remain with all the deplorable consequences of constriction, inflammation, and gangrene. The case to which I have alluded resulted in the sloughing of the whole penis; in another instance, which came to my knowledge, the head of the penis was lost; and a third instance of the kind produced an artificial epispadias.[1]

---

[1] The first of these children survived but a short time; the second one, whose parents reside in the city of Washington, is troubled, I am told, with painful and difficult micturition.

Great mischief is sometimes done in cases where the foreskin is attached over the glans penis. The attempt to separate this attachment is both useless and cruel. According to my experience, this agglutination of the mucous surfaces is seldom uniform and complete, and is gradually loosened, and finally separated, by the frequent erections of the organ in the act of urinating. These attachments are most tenacious about the corona glandis, where little worm-like projections, of a whitish color, form, easily seen through the transparent membrane, and which are nothing else but aggregations of the natural secretion (smegma) of the sebaceous glands. In older children these adhesions can be readily separated without causing much pain.

I circumcised three boys of the respective ages of four months, fifteen months, and two years, whom non-professional persons neglected to circumcise, and only drew a little blood in conformity to a religious rule, which provides that children born without a prepuce, which occasionally happens, must be slightly wounded about the organ to yield a drop of "the blood of the covenant." The mistake in these cases was, undoubtedly, owing to the presence of a congenital paraphymosis, as I have met several instances of the kind, which, but for the knowledge of the possible occurrence of this condition, might have led me into an error of diagnosis.[1] Within a week's time, the redness and swelling of the parts healed, by frequent bathing and the application of a weak solution of Goulard's lotion.

A kind of malformation is sometimes met with in male infants, which causes considerable anxiety to the parents, and seems to forbid the operation of circumcision. In these instances, the scrotum and the enclosed testicles are perfect and in proper position, but the place of the penis is occupied by a small globular tumor, resembling a nipple, which proves to be the point of the prepuce. On closer examination, the finger will feel the body of the penis imprisoned behind the little pouch of foreskin, and ready to spring forward when released from its confinement by circumcision.

A few cases came also under my notice, in which great difficulty was experienced in relieving the bladder, dependent on a contracted state of the preputial orifice. The foreskin in these children presented an unsightly, mangled appearance, in consequence of a bad operation of circumcision. I found a considerable portion of the prepuce hanging loosely about the corona glandis. The head of the penis was still covered by the internal fold of the foreskin, which had already acquired some of the characteristics of the outer integument. It is probable that, in these cases, the circumciser had been foiled in his effort at laceration, and merely wounded the margin of the preputial opening, which, on healing, contracted and interfered with the free flow of the urine. I remedied this fault in the usual manner of operating for congenital phymosis, but preferred the plan of cutting off the triangular flaps, which remain after the prepuce has been slit open.

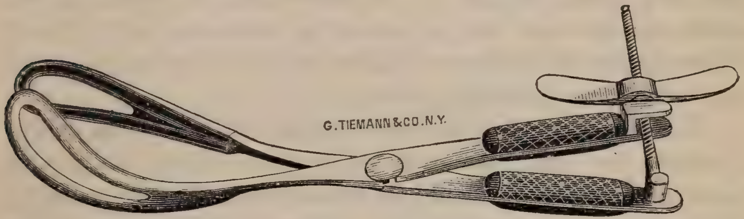
---

[1] See Hunter on the Venereal Disease.

In conclusion, I would briefly refer to the omission of the art of laceration in the circumcision practised by the Arabians and Mohammedans. This has been variously explained, but is now generally believed to be owing to the custom prevalent among these people, of circumcising their children between the ages of six and thirteen years, when the prepuce has acquired a consistence which would render its laceration a very painful, and even a hazardous operation. But the assertion, that a great degree of resistance is offered by the inner fold of the foreskin, in children of an advanced age, is denied by the experience gained in the United States, where circumcision is often postponed by Jewish parents, who reside in remote and isolated parts of the country. My observations have led me to agree with other American operators, but I am constrained to add, that the wound in these instances assumes, not unfrequently, a threatening appearance, and heals slowly. It were desirable that, in all cases of circumcision among the Israelites, the instrument invented by Dr. Ferguson, which he calls a pastheton, be employed for the purpose—or an improved pattern recommended by Dr. Bergson—or what I consider preferable, the scissors, with button and blades, proposed by Dr. Brecher—instead of the rough and primitive use of the finger-nails.

Art. V.—*A New Cephalotribe.* By W. T. Lusk, M. D., New York.

Two years ago, I reviewed the history of the cephalotribe, from its earliest origin. The investigation then made proved the futility of attempting to invent any new principles to be applied to the construction of that instrument. Still, as the cephalotribe has not been held in this country in the esteem it really merits, I have attempted to recombine certain features that have been pretty well tested by time, in a form which, while meeting all necessary indications, does not present the needlessly repulsive features which have hitherto constituted so powerful a bar to its adoption.



By referring to the wood-cut, it will be noticed that the instrument, which, with the above disclaimer, I may call new, possesses a distinct cephalic curve (2¼ inches outside measure, 1⅞ inches between the blades). This feature is peculiar to the Prague models (Leyfert's, Breisky's), and converts the cephalotribe into an effective extractive instrument. Generally the blades have been constructed nearly parallel, with the view of producing the utmost degree of compression. But, with parallel blades the head acts like a wedge, producing divergence at the extremities of the blades, and rendering the instrument liable to slip vertically so soon as tractions are attempted. Now, without much reflection, it might be thought that, by furnishing the cephalotribe with a cephalic curve, the very principle for which it is constructed, viz.: to crush, to compress the head, would be sacrificed. But Von Weber has very well shown that it is not the head alone, but the instrument as well, that has to pass the contracted diameters of the pelvis, and that it makes very little difference whether the divergence of the blades takes place at the extremities, or at the centre, so far as regards their passage through the pelvic straits; only, in the latter case, we have a cephalotribe, which is not only a good compressing instrument, but a powerful tractor besides. Now, in the best instruments, with parallel blades, the separation of the extremities, after reduction of an ordinary fœtal head, is rarely less than two inches, a measure which, when shifted to the centre, furnishes the cephalotribe with a good cephalic curve.

Another advantage of the cephalic curve is, the additional strength it imparts to the blades, which may therefore be made materially lighter, and furnished with fenestræ like ordinary forceps. After the compression of the perforated head has been completed, so far as practicable, by means of the screw, the action of the instrument is continued by virtue of the resiliency of the curved blades, until the extremities come very nearly, or quite into contact.

The instrument is likewise furnished with a pelvic curve, a feature that has been objected to by some, on the ground that the cephalotribe should be rotated, so as to correspond to the conjugate diameter of the pelvis—in order to bring the long diameter of the head, flattened between the blades, into the transverse diameter of the pelvis, when, of course, extraction would become impossible with a pelvic curve. It is, however, an error to suppose that a powerful lever, like the cephalotribe, can be safely made to rotate within a rachitic pelvis beyond an oblique diameter, when, if extraction cannot be accomplished, the remedy lies, not in further rotation, but in the further reduction of the head, by removal of the instrument, and its reapplication in the opposite oblique diameter.

The Naegele-Brüninghausen lock has been chosen, in preference to the English one, as being more compatible with lightness in the handles. The compression apparatus consists of the ordinary fly-nut and screw, sufficiently familiar through the instruments of Simpson and Blot.

The entire weight of the instrument is, according to Mr. Tiemann, two pounds.[1]

---

[1] This instrument is now manufactured by Messrs. George Tiemann & Co., of this city.

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, June 7, 1869.

Dr. George T. Elliot, President, in the chair.

The President announced the election of Dr. Robert McNeil to membership.

Dr. Salvatore Caro read a paper upon *the Treatment of Summer Complaints by the Bromide of Potassium.*[1]

Although the title of this paper comprises the entire range of diarrhœal diseases both of adult and infantile life, special reference was had to the diarrhœal diseases of infancy, cholera infantum standing prominent in the list. The causes, symptoms, progress, and termination, of this complaint were described at length, as well as, in a general way, the treatment which is usually considered orthodox in these cases. Then stating that an accidental success in the treatment of several cases, wherein he had administered the bromide for other purposes than to control the diarrhœa, had led him to more fully test the value of this remedy, the speaker narrated twenty cases which might be taken as types of the cases usually met with in practice, and which were selected from one hundred and sixty-three recorded cases occurring under his own observation. We present herewith, from the *Record*, five of the cases in full:

III. John Sinott, twenty-eight months old. I took charge of him on the 1st of August. For several days he had been suffering from vomiting and purulent discharges from the bowels. I prescribed aromatic syrup of rhubarb with laudanum, but without effect. On the 2d I gave twenty drops, every hour, of a mixture of ten grains of bromide of potassium, in an ounce of mucilage, with twenty minims of tincture of krameria. After a few doses the child slept, and upon awakening asked for bread and butter. Vomiting ceased. The flux of the bowels changed from purulent to yellow; and the twenty-four to thirty passages, every twenty-four hours, diminished to six. He became convalescent, and on the 8th was discharged.

IV. J. A. Crigier, twenty months old; has twelve teeth. According to his mother's statement, he has never given trouble, eating and drinking whatever was offered him. On the 3d of August he fell from a chair, striking his buttock, apparently receiving no injury. During the night his bowels became loose, accompanied by vomiting of a dirty-water-like substance. In the morning he had convulsions. During the afternoon I found him very comatose; pulse from ninety-five to one hundred; pupils dilated; hemiplegia of the right side; alvine discharges, from twelve to fourteen, every twenty-four hours, of a thin fetid matter. About every six hours convulsions of ten minutes' duration, accompanied by vomiting. I prescribed revulsives to the lower extremities and arms; and, every two hours, twenty drops of a mixture of one drachm of bromide of potassium, in an ounce of mucilage. The motion of the bowels and vomiting ceased.

---

[1] This paper is published in full in the *Medical Record* of July 1, 1869.

After a few days, as the comatose and hemiplegic condition continued, iodide of potassium brought matters right. On the 1st of November he had another fall, merely affecting his bowels by free motion; the bromide of potassium immediately stopped it.

V. John Balheimer, thirteen months old; has six teeth; is fed by the bottle. On the 15th of August I saw the child for the first time. He had been suffering for fourteen days from inflammatory dysentery, having passages of a purulent and bloody nature, from twenty to twenty-four, every twenty-four hours. His thirst was intense; he vomited every fluid offered him. The eyes were sunken, pupils dilated, skin corrugated and spotted blue, body cold, tongue red and dry, pulse imperceptible; no urine. In addition to this, he had bronchitis, with severe cough. I prescribed one scruple of bromide of potassium, in an ounce of mucilage, with half a drachm of tincture of krameria, twenty drops every two hours. The passages decreased. On the sixteenth day of his sickness, and the second under my care, he was able to eat and sleep. His passages were only four in twenty-four hours, and of a healthy appearance. In order to allay the bronchial cough, I prescribed ten drops of fluid extract of poppy, to be taken every two hours. On the 1st of September he was discharged. A few days later he had a relapse, and on account of distance was placed under the care of a homœopathist, and died.

On the 15th, an elder brother was brought to me, suffering in a similar manner from dysentery. The disease was immediately checked by the bromide of potassium.

X. J. McEvoy, twelve and a half years old: a healthy boy, attending school. August 13th, having eaten a bellyful of green apples, he was seized with cramps in the belly and legs, colic pains, vomiting, and loose bowels. For forty-eight hours his parents doctored him with castor-oil, paregoric, cholera drops, mustard baths, etc., etc., but without giving relief. I was sent for on the 15th, the third day of his sickness. I found him with eyes sunken, skin cold and corrugated, extremities bluish, which upon being touched would leave the white impress of the fingers for more than twenty-five seconds. The abdomen was almost stuck to the vertebral column; breath hurried and hot; tongue pale; voice scarcely audible.

The boy was shivering with cold, although covered with mustard plasters, blankets, etc., and in an exceedingly hot, low-ceilinged room on the top floor. His thirst was intense. The drinks given him were, rice-water, beef-tea, brandy-and-water, ice-water, milk-whey, etc. No sooner taken than ejected indiscriminately, both up and down, almost in their natural state. I thought this case almost hopeless, but, trusting to the efficacy of the bromide of potassium, I prescribed a half drachm in an ounce of water, a teaspoonful every two hours; also a flaxseed meal poultice over the abdomen. The second dose caused great reaction, stopping the vomiting and flux of the bowels, and the boy fell asleep. The next morning I found him in his hot, unhealthy room, laughing and well.

I have had twenty-five similar cases, ranging from twelve to forty-six years of age.

XIV. J. Higgins, a healthy infant, deprived of the breast from his mother's dying seven days after confinement. When only three days old he began to suffer from retention of meconium. All nourishment was ejected with great force, even the breast milk of a woman confined five days before his birth. The stomach, from the irritating action of the meconium, could not retain either medicine or food, nor could the bowels be moved. Ten grains of the bromide of potassium in an ounce of orange-flower water, ten drops every hour, put a stop to all disagreeable symptoms; the baby slept, its bowels moved, and, after the discharge of the meconium, it commenced to nourish from the bottle without any further disagreeable results.

I had three similar cases, not owing to the mothers' death, but the infants being deprived of the maternal nourishment from other causes.

The paper concluded as follows:

Now let us speak on the merits of the drug. Taking for granted that, in matters of fact, in medicine particularly, we can judge better *a posteriori* than *a priori*, I submit my cases and conclusions to this enlightened body. Not accepting the doctrine of some of the modern writers, that the intestinal flux is a symptom of some inflammatory affection, but adopting the opinion of the celebrated Capuron, that infancy being naturally the age of nervous sensitiveness, susceptible to internal and external impressions, easily irritated or calmed, and judging from several other cases besides those just read, I think that, in its beginning, summer-complaint arises from an over-excitement of the nervous and vascular systems, and that therefore the bromide of potassium affects it, and acts as a sure cure.

I cannot better explain the action of the bromide of potassium on the system, than by quoting the words of Headland, found on page 272 of his work, "*On the Action of Medicines:*" "The bromide of potassium, a medicine of the mineral kingdom, has been much recommended lately for its power of producing sleep; it is, however, not a true soporific, but rather a general sedative. As far as my experience goes, it acts by allaying irritability of the brain, spinal cord, and sexual system, and thus may indirectly cause sleep." And on page 283,—"The bromide of potassium, a remedy of recent introduction, is exceptional among nerve medicines, as belonging to the mineral instead of the vegetable kingdom. It quiets the nervous system generally, allays pain, promotes sleep, and subdues a morbid irritability of cutaneous or mucous surfaces, by its influence over functional disorders of the nervous centres. It is only indirectly soporific, as far at least as I have been able to judge." Mr. Gubler considers the bromide of potassium a general sedative to the nervous system, allaying irritability of the mucous membranes, and at the fauces and genital passages especially. He thinks it hypnotic, causing sleep by its sedative action on the whole nervous system. M. Vigouroux thinks it acts by diminishing vascularity of the great nervous centre. It is therefore the remedy, *par excellence*, for the nervous complaints that are common in large cities.—(*L'Union Médicale*, 1864.)

I have never discovered any unpleasant effects produced by the use of the bromide of potassium, and have always found it to answer my purposes. If locally applied, it reduces the excessive heat found in the mouth of the baby, caused by the inflamed condition of the gums. On introducing the thermometer into the mouth or anus of the baby, I have seen the temperature fall four or five degrees. The drug is an anæsthetic to the nerves of the mucous membrane of the alimentary canal from the mouth to the rectum, of the urethra, the conjunctiva, and the nares. It is also a diuretic. In cases where the urine has not been voided for twenty-four hours, after the first dose of the bromide it is freely passed; the skin commences to feel warm, and becomes covered with a gentle perspiration, removing uræmic symptoms, causing general reaction, and invariably the decrease of the intestinal flux, and an absolute cessation of vomiting.

The medicine being almost tasteless, and of no bulk, it is easily taken by the most fastidious and troublesome child. I generally prescribe from ten to thirty grains in an ounce of vehicle, either mucilage or orange-flower water, for their pleasant taste; the dose being ten to thirty drops every hour or two, varying according to the age of the patient, and the acuteness of the case. I seldom use astringents with it; but, if required, I select the tincture of krameria, as less disgusting than kino and others. For local application, I mix the salt with mel rosarum, generally using one scruple of the first to an ounce of the latter, permitting the mother to rub it on the gums with her finger *ad libitum*. When used in large doses, I have not found very satisfactory results from the bromide of potassium; but I always succeed with minute doses.

You will observe that, of the cases I have just reported, only three died, and the fatal result in these was due not to the bowel complaint, but to other causes. I had also four cases which I purposely and obstinately treated according to the generally-adopted system. To my regret I must confess, that but one, after a long and severe struggle, recovered; the other three died.

Dr. Calkins deemed hot-water and hot-vapor baths invaluable auxiliaries in the treatment of the bowel complaints of children, and related a fatal case, which he thought had suffered from their omission.

Dr. Garrish had found the bromide fail to control the nausea and vomiting of pregnancy, and asked Dr. Caro's experience.

Dr. Caro had not used the drug in pregnancy, as he had gained the impression, from something in his reading, that it was emmenagogue, and might do harm. He had found it immediately arrest the vomiting in the case of a woman with Bright's disease, who had, for three or four weeks, been unable to retain food. It had stopped the nausea and vomiting in a case of typhoid double pneumonia.

Dr. Chadsey had been using the bromide quite freely, for the last three months, in affections of the stomach and bowels. It had happily relieved the only case of cholera-infantum he had chanced to have in that time. In a case of vomiting, in the commencement of pregnancy, which nothing else would check, it had been promptly effective, and no bad results had followed—indeed, none had been anticipated. A druggist, having a very large prescription business, had said that the consumption of the bromide had quadrupled within a short time, and that it was now greater than that of the iodide, which it was replacing in many instances.

The President was asked whether he considered the bromide an emmenagogue. He replied that he had used it in many cases of pregnancy, as well to control the nausea and vomiting as for other indications, and his experience was that it had no emmenagogue action whatever. He was in the habit of employing it freely, and in large doses, in dysmenorrhœa, to gain its sedative effect, and he had never seen it increase the flow. He could not, therefore, think we were justified in refraining from its use on account of the pregnant condition. He had not found it so satisfactory a remedy in the nausea and vomiting of pregnancy as to lead him to give it the first rank; but neither did he know any other remedy to which this could be assigned. In the treatment of such a symptomatic disorder we must expect failure. It was trying to remove the effects of the thorn in the flesh, without removing the thorn. Among the articles that had lately appeared, commending the bromide in the various forms of nausea, was one by Dr. Storer, of Boston, showing that it counteracted the nauseating effects of ether.

With regard to the class of cases related by Dr. Caro, Dr. Elliot yielded entirely to him in experience, and could speak, from personal knowledge, of his accuracy of observation and record. His testimony was of such value that it would probably more or less shape the practice of his hearers this summer. In the case of a rachitic little child, suffering from whooping-cough and bronchial catarrh, with a good deal of diarrhœa, refusing nourishment, and lying on the bed, with hot skin, restless and fretful, Dr. E. had given the bromide alone, and its effect was delightful. It had produced like results in one or two other cases equally unpromising.

As to the extended use of the salt, Dr. Chadsey was certainly right. Probably every druggist was now selling much more than four times as much of it as a few years ago. For his own part, while prescribing it much more frequently than before, it was not so lately that Dr. E. had been awakened to its value. Fourteen years ago it was his favorite remedy in spasmodic croup, and bronchial catarrh, with irritation of the respiratory passages. Having about that time a troublesome case of spasmodic croup, he had at last given the mother the prescription, labelled "Preventive for croup," to be used whenever she saw an attack coming on. On her return from Europe, the lady said it had worked so well that she had given the prescription to some sixty families.

The hypnotic action of the bromide was so well known as to need no comment. The danger was, now, that too many of the public would acquire the habit of taking it, as a regular thing, to procure a quiet night's sleep. Dr. E. believed that a gentleman of this city had lost his life from its excessive and habitual use. A prescription given to secure sleep, this man had kept and had renewed, again and again, until he used to lie half the day in a state of languor. Coming under the speaker's care, his habit was discovered, and finally given up;

but not before it had produced the prostration which was probably the cause of his death.

Dr. CARO, in response to questions, said that he had commonly given the small doses—one-fourth of a grain to three grains—mentioned in his record of cases; and that he had never, save in a single instance, given a dose larger than eight grains. He had seen no eruption follow, except in one case, and there he thought it not attributable to the bromide.

Dr. KENNEDY thought the dose of the drug might be considered very indefinite. He had himself taken a large amount of it last winter, for an obscure trouble in the head and pain in the shoulders—the doctors were undecided about the diagnosis, but agreed in recommending the bromide. He had begun with a solution of two drachms of the salt to four ounces of water, a teaspoonful every three or four hours. This dose he increased till he was taking two and four drachms of the salt daily. Then he bought half a pound of it, and made a saturated solution, of which he took at first a teaspoonful, and afterward a tablespoonful, four times a day; and he thought he might have taken more without injury. It gave a very pleasant night's rest, and a delightful feeling of languor and lassitude, which was continued for days and weeks. He had observed the eruption; also that the medicine disturbed the bowels and stimulated the kidneys; but, in his own case, it did not at all disturb the stomach, simply producing an agreeable sense of warmth. He believed that, where the nervous system is irritated, from whatever cause, and it becomes necessary to soothe either body or mind, the bromide is an excellent remedy. He would recommend it to be taken freely in such cases, and especially by rum-drinkers.

The PRESIDENT stated that a saturated solution in water was one part to four.

Dr. FARNHAM referred to the cases reported by Dr. Hammond, where the bromide, in large doses, had produced insanity.

The PRESIDENT had once given half an ounce in the course of one night, in a bad case of delirium tremens. The morning came, and it had produced no perceptible effect; but a shower-bath on the head and neck put the patient to sleep in a couple of hours. He would hardly give such a dose again; for, although some persons might bear it well, there was undoubted testimony to its evil effects on others. We should remember the fate of Fountain, who, to prove his views of the harmlessness of chlorate of potassa, took the dose which killed him.

Dr. HOWARD had used ten grain doses, every two hours, with great benefit, in cases of sick headache.

THE SABBATH QUESTION.

The PRESIDENT read a communication from a committee of the Evangelical Advertising Association, asking an expression of opinion, by the Society, upon the necessity for a Sabbath of rest, on every seventh day, for the physical welfare of mankind.

Dr. PEASLEE.—If this subject takes the usual course, and is referred to the Comitia Minora, this committee can get no reply from us till fall. I should, therefore, be in favor of passing some such resolution as they propose, without reference to the Comitia Minora; and I move the following:

Resolved, That one day's rest from labor in seven is necessary for the health both of the mind and the body.

Dr. CALKINS.—It seems to me, Mr. President, that we ought to take a little more time before passing a resolution of this kind. Though I doubt not we should all agree with the spirit of the resolution, yet I think it would be regarded by the public in a religious aspect; and that we should have a stated meeting to discuss the subject.

Dr. KENNEDY.—I have the honor of knowing the gentlemen who make this request, and there is no doubt that it was with the view of presenting the question in its religious aspect that it was brought up. Why not say every sixth, or fifth, or tenth day? This Society might, by passing such a resolution, offend a class of people who do not care for the Sabbath; and I suppose we do not wish to offend any class.

The PRESIDENT said that this was an abstract question, put by Dr. Peaslee; that it bore no religious character, and made no reference to duty.

Dr. CALKINS thought that, if the resolution were passed now, it would appear as if done at the dictation of the clergymen who had asked for it. If the Society wished to pass upon the question, let it be after proper reference and full discussion.

Dr. Joel Foster thought every member was as ready to vote upon the question as he would be after a protracted debate.

After some further discussion, Dr. Peaslee's resolution was carried. The President explained that he had acted in a strictly official capacity, and without regard to his personal opinions.

The Society then adjourned.

MINNESOTA STATE MEDICAL SOCIETY.

Semi-annual Meeting at Owatonna.

The State Medical Association convened at Owatonna on the 16th of June, Dr. J. H. Murphy temporarily in the chair.

Minutes of last meeting read and approved. A committee of three on credentials was appointed, when the convention adjourned until 2 P. M.

AFTERNOON SESSION.

Dr. Saml. Willey, President of the Society, in the chair.

The committee on credentials having investigated the credentials of the following named gentlemen, and recommended them for membership, they were unanimously elected:

F. S. Bodle, S. L. Bennett, Owatonna ; F. H. Milligan, W. L. Lincoln, Wabasha ; W. H. H. Richardson, J. B. McGaughy, Winona ; E. S. Gibbe, Geneva ; C. Hill, Pine Island ; L. Redmon, Preston ; H. H. Guthrie, St. Charles ; O. W. Sadler, Concord ; C. P. Adams, Hastings ; S. B. Le Blond, Brownsville ; J. L. Wakefield, Shakopee ; F. M. Rose, Faribault ; E. C. Crop, Rochester ; C. H. Boardman, St. Paul.

Dr. H. Kimball, essayist, appointed at the last meeting, being unavoidably absent, his paper on Rheumatism was read by Dr. W. F. Hutchinson, of Minneapolis, and placed on file.

A long discussion ensued upon the points presented by

Dr. Kimball, participated in by several members, and it was the opinion of nearly all present that the climate of this State has been unjustly condemned as exercising a harmful influence upon this disease.

Dr. Rhodes, of Stillwater, introduced a resolution prohibiting the admission of any person to membership in the Society, until he had presented to the committee on credentials full and satisfactory evidence that he was a regular practitioner of medicine. After some debate by Dr. Adams, of Hastings, and the President, the resolution was adopted.

The report of the several county committees, appointed to ascertain the names and number of regular and irregular practitioners in the State, then made the following report:

Counties.	Regular.	Irregular.	Counties.	Regular.	Irregular.
Ramsey	24	21	Wabasha	8	4
Hennepin	18	21	Steele	5	4
Washington	4	5	Olmsted	8	6
Fillmore	11	8	Goodhue	8	4
Dacotah	5	4	Winona	20	9
Houston	4	5	Dodge	4	2

Dr. Murphy announced that the President, Dr. Willey, had authorized him to offer for competition among the members of the Society the following Prizes:

Fifty dollars for the best essay on the epidemic and endemic diseases of Minnesota, and

Fifty dollars for the best essay upon cerebro-spinal meningitis—the relative merits of the essays to be decided upon by a committee to be appointed by the President, the names of the competitors not to be made known until after the award of the prizes.

On motion of Dr. Mattocks, of St. Paul, a vote of thanks was tendered to Dr. Willey for his generous offer.

Dr. Mattocks then opened the subject for discussion, Quackery, in a spirited address. A lively debate ensued, participated in by Drs. Rhodes, Murphy, Hutchinson, Blond and others—when, on motion, the subject was changed to Typhoid Fever. This having been thoroughly discussed, on motion of Dr. Milligan, of Wabasha, the following committee was appointed by the chair to investigate the cause and treatment of Typhoid Fever, to report at the next annual meeting. Drs. Milligan, Richardson, and Mayo.

The Society then adjourned to the next general meeting at St. Paul, February 2, 1870.

THE NEW HAMPSHIRE MEDICAL SOCIETY.

The New Hampshire Medical Society held its seventy-ninth annual meeting in Concord, on the 15th and 16th of June. It was called to order on the 15th, at eleven o'clock A. M., by the President, Dr. Levi G. Hill, of Dover.

The morning session was mainly taken up with business matters. The President's address was delivered at twelve o'clock. It was an able and interesting production, receiving the marked attention of all the Fellows present.

In the afternoon, reports were read from different committees. A very interesting paper was read by Dr. W. D. Buck, of Manchester, the orator for 1869, upon the subject of Medical Education and Progress. This paper was keen, learned, and eloquent, well sustaining the high reputation of its distinguished author.

Dr. L. B. How, of Manchester, made an elaborate and highly interesting report on Surgery, which met with marked acceptance from all present. At four o'clock, P. M., a eulogy on the late Dr. Reuben D. Muzzey was delivered by Prof. A. B. Crosby, of the Dartmouth Medical School, of which Dr. Muzzey was for a long time a distinguished Professor. This address was a touching and eloquent tribute to the worth and ability of this world-renowned surgeon.

An evening session was held, the time of which was taken up with discussions on miscellaneous medical subjects, of a highly practical as well as interesting character.

The following are the officers elected for the present year: President, W. W. Brown, of Manchester; Vice-President, W. H. H. Mason, of Moultonborough; Secretary, G. P. Conn, of Concord; Treasurer, Thomas Wheat, of Manchester.

The session of the 16th was almost entirely of a business character. M. R. Holbrook, M. D., a delegate from the New York Medical Society was elected an honorary member of the Society. The committee appointed to investigate the charges against Dr. S. B. Kelley, of Franklin, for open and persistent violation of the Code of Ethics which is adopted by the American Medical Association and the different State Societies, reported the charges were fully sustained, and a resolution was unanimously passed expelling Dr. K. from the Society.

This annual meeting has been of a very profitable and gratifying character. The attendance has been excellent from our own State, and delegates were present from New York, Massachusetts, and Rhode Island. The able papers read, the rare cases reported, and the discussions thereon, cannot fail to be conducive to the advancement of the profession, and therefore to the public benefit; for there can be scarcely any thing of more vital importance to the people than that it should be provided with a body of scientific physicians and surgeons.

The eightieth annual meeting of the Society will be held in Concord on the third Tuesday of June, 1870.

Bibliographical and Literary Notes.

Art. I.—*On Varicose Disease of the Lower Extremities, and its allied Disorders—Skin Discoloration, Induration, and Ulcer—being the Lettsomian Lectures delivered before the Medical Society of London, in* 1867. By John Gay, F. R. C. S., etc. London: John Churchill & Sons, 1868, pp. x., 171.

Mr. Gay has taken considerable pains to go over afresh the whole subject of varicosity, starting with a careful anatomical study. The results of his investigations in some points are at variance with the commonly-received ideas, and may be briefly stated to be as follows:

The first step toward varicosity is saphenous dilatation, which is not "effected actively and solely by any force evolved by the various agencies directly concerned in carrying on the circulation, nor to the alleged disadvantages of the columnar pressure of the blood." The real cause lies in the muscular system, which effects the dilatation by means of the obstruction caused by the less capacity of the saphenous trunks as compared with the sum of their branches, and also by various foramina which act as valves. Consequently the blood accumulates and dilates the vein-walls. He discusses in the detail the various forms of the disease with reference to seat, degree, and the particular changes most commonly occurring in the different veins. Varicose disease begins in the branches of the saphenæ and extends to the muscular veins. The *sthenic* varicosity he describes as a special disease of certain unvalved branches of the saphenæ which connect trunk-veins. The "*asthenic*" variety involves the tributary and terminal branches as well as the trunks, and is probably due to fatty degeneration of the muscular coat of the veins. The immediate cause of varicose disease is obstruction, direct or indirect, to the current in the trunk-veins.

The etiology is analyzed at some length, and then follows a *resumé* of treatment.

The close of the book contains an examination of the pathological changes found in the discolorations of the integuments of the leg, which he thinks due to the venous disease as a general rule.

In regard to the dependence of ulcer upon varicose disease, however, the author thinks the received opinion to be erroneous, that, "in fact, the varicose ulcer, in the sense in which it is usually understood, is a fiction," and that the veins are more likely to suffer injury from the ulcer, than the ulcer from the vein. His division of ulcers is into *simple*, where the morbid processes are limited to the confines of the tissues directly engaged therein; the *venous* (not varicose) dependent upon obstructive disease of the trunk-veins, superficial and deep, and associated with "bronzing," etc., and arterial, due to incompetency of the arteries.

The above are the chief conclusions of Mr. Gay's investigations. The book is illustrated by plates, lithographed by the author from sketches made of his dissections. He has done wisely, in deciding "to give them simply as diagrams, rather than attempt any thing more, solely for the sake of artistic effect."

Art. II.—*Orthopraxy; the Mechanical Treatment of Deformities, Debilities, and Deficiencies of the Human Frame.* A Manual by Henry Heather Bigg, Assoc. Inst. C. E., etc. Second edition, revised and enlarged. With 308 illustrations. London: John Churchill & Sons, 1869, pp. xxv., 641.

The first edition of Mr. Bigg's book has been so generally and favorably known, as to almost preclude the necessity of a notice of the second. The work occupies a position different from any other with which we are acquainted, for the author has viewed the subject from the stand-point of a scientific mechanician rather than that of the surgeon, and thus is able to give opinions drawn from a field of experience very extended and trustworthy. A surgeon, who has devised an apparatus for any given deformity or injury, is apt to look upon it with partiality, not only by reason of its parentage, but because he has probably acquired especial skill in its adjustment. It by no means follows that the same instrument will prove a success in the hands of the generality of surgeons. The mechanician has an opportunity, however, of judging in some degree of the comparative appropriateness and success of various forms of apparatus. By mechanician we mean, of course, an educated one, not one of the routine tradesmen, whose only skill appears to be to annoy the surgeon and thwart his designs, and to aggravate rather than alleviate the patient's sufferings. Mr. Bigg has examined not only the forms of apparatus now in vogue, but has taken pains to compare them with those which have passed out of use, thus escaping a common blunder of bringing out, as new, instruments which are simply revivals of old ones, long ago found to be useless or inferior. The work is not, however, simply an illustrated catalogue of apparatus, but contains a summary of the surgical principles involved in the treatment of the various deformities, and in this particular is quite up to date. It cannot fail to be of use to every one who pretends to take in charge the class of diseases of which it treats.

To point out the additions which appear in the second edition would too much extend this notice; in closing, however, mention may be made of a new form of lateral curvature described by the author, which he styles: "Croquet Curvature," from its origin in the popular game; it is characterized by the dropping of right shoulder and left hip, a combination occurring in no other variety.

The theory advanced, and which, if adopted, would, in the opinion of the author,[1] lead to important practical results, is shortly this:

Counter-irritation acts by improving the nutrition of the the diseased part. This it does by an influence propagated from cell to cell of the intervening parenchyma, no matter whether the tissues be continuous, or (as in the case of internal organs) merely contiguous.

To make way for this innovation, the author proposes to overthrow the existing theories upon this subject, by deductive reasoning from certain facts.

An attempt of this kind requires on the part of its author special care as to what he admits as *facts.* It requires, also, that, when a fact has been clearly and accurately stated, it should be viewed from all sides, and not from that stand-point only which will favor the preconceived notions of the writer.

These remarks apply to the assumption that the paralysis of an over-distended bladder is the result of defective nutrition, that the first stage of inflammation is simply increased nutrition, and that, after inflammatory exudation has taken place, diminishing the supply of blood to the part can only aggravate the disease.

"Facts" of this kind require something more than their mere assertion to render them acceptable to the majority of readers, as levers to overturn old theories or as the basis of a new hypothesis.

Again, admitting that an irritant applied to the abdomen may cause redness of the corresponding portion of the parietal peritoneum, and that local inflammation of the pleura pulmonalis may excite inflammation of the opposing pleura costalis, it is a very narrow view which can see no other conclusion to be drawn from this than that a sinapism relieves flatulent colic by a change of nutrition acting directly through the intervening tissues.

---

[1] On Counter-Irritation—A Theory constructed by the deductive Method of Investigation. By James Ross, M. D. London: J. Churchill & Sons. Pamphlet, 44 pp.

On a par with the above reasoning is the argument that, because no one of a number of causes, acting singly, is capable of producing all the phenomena observed, therefore their collective action is to be set aside entirely, and the existence of another cause assumed. Because we cannot explain *all* the phenomena of counter-irritation by the changes which take place in the distribution of the blood, or by the changes in the blood itself, or by the influence of the nervous system, it does not follow without further consideration that all these agencies must be rejected as inoperative, or that their joint action may not be adequate to the explanation required.

That the inherent improbability of the theory is not lessened by such reasoning may be readily inferred.

In the June number of the Journal, p. 283, a review of this work[1] has already appeared, wherein its merits are fully acknowledged. Nothing further is therefore necessary, except such notice as another edition may demand. We cannot see the wisdom of thus putting two editions simultaneously upon the market, even if it be reconcilable with trade courtesy. The edition of Messrs. Lindsay & Blakiston has very much the advantage of the other in appearance, which is not at all counterbalanced by the additions of cuts, etc., made to the American edition, which are of very doubtful value.

A new edition of Paget's "Surgical Pathology" is announced in London, by the Longmans; to be revised by the author and Prof. W. Turner. Sir Thomas Watson's "Practice" is also promised by the same house.

Messrs. Macmillan & Co., of London, have in press, and will shortly issue, a work entitled "A Physician's Problems." By Chas. Elam, M. D.

---

[1] A Treatise on the Diseases of the Eye, by J. Soelberg Wells. First American edition, with additions, illustrated with 216 engravings on wood, and six colored plates. Philadelphia, Henry C. Lea. Pp. xx., 736.

MESSRS. WM. WOOD & Co., of this city, are announcing quite an extensive list of new publications, viz.:

A Complete Practical Text-Book of Surgery. By Prof. Frank H. Hamilton, M. D., of Bellevue Medical College. Illustrated.

A Text-Book of Obstetrics. By Prof. Wm. H. Byford, M. D., of Medical College. Illustrated.

A Treatise on Epilepsy. By M. Gonzalez Echeverria, M. D. Illustrated by steel plates and chromo-lithographs.

Wood's Vest-Pocket Medical Lexicon. Edited by D. B. St. J. Roosa, M. D. Revised and enlarged.

Politzer on the Tympanum. Translated by Drs. Newton and Mathewson. Engravings and chromo-lithographs.

A Practical Compendium of Electricity and Electro-Therapeutics. By Drs. Beard and Rockwell. Many engravings.

Archives of Ophthalmology and Otology. Edited by Profs. Knapp and Moos. Half-yearly. Illustrated by fine lithographs and chromos.

A Report on the Progress of Practical and Scientific Medicine. By Horace Dobell, M. D., assisted by numerous and distinguished coadjutors.

Lessons in Elementary Chemistry, Inorganic and Organic. By Henry E. Roscoe. Revised edition. Engravings, and a colored frontispiece.

Clinical Notes on Diseases of the Larynx. By William Marcet, M. D., etc., Assistant Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

A Manual of Orthopraxy. By Henry Heather Bigg, Assoc. Inst. C. E. 2d ed. Illustrated.

J. B. LIPPINCOTT & Co., of Philadelphia, also announce Diseases of the Mouth and Associate Parts. By J. E. Garretson, M. D. Illustrated. The Stomach and its Difficulties. By Sir James Eyre.

BOOKS AND PAMPHLETS RECEIVED.—The Transactions of the New York Academy of Medicine. Vol. iii. Part vi.

This fasciculus of the Transactions contains a very able and interesting paper on the Etiology and Prophylaxis of Bright's Disease, by Gouverneur M. Smith, M. D.

A Case of Herpes Zoster Ophthalmicus in a Patient Eighty Years of Age, causing fatal Prostration; with Remarks. By B. Joy Jeffries, M. D. Reprint from the *Boston Medical and Surgical Journal.* Pamphlet, pp. 15. *From the Author.*

On Counter-Irritation. A Theory constructed by the Deductive Method of Investigation. By James Ross, M. D. London: John Churchill & Sons, 1869. Pamphlet, pp. 44.

Reports on the Progress of Medicine.

THEORY AND PRACTICE.

1.—*The Diagnosis of Dyspnœa.* By Hyde Salter, M. D. [British Medical Journal, December 5, 1868.]

There are three common sources of dyspnœa with which asthma is more likely to be confounded than any others—bronchitis, emphysema, and heart-disease—all others being comparatively infrequent. The diagnosis of asthma then is, practically, its diagnosis from these three diseases.

The form of dyspnœa that comes the nearest to that of asthma, and whose diagnosis, therefore, from asthma requires the greatest care, is doubtless, the dyspnœa of heart-disease. The two resemble one another in many points: in both the dyspnœa is paroxysmal, in both it is intense and violent in its character, in both the night is the time for its principal occurrence, in both the recumbent position is intolerable, and the erect position enforced, in both the distress is aggravated by exertion, and the patient fixed and unable to move. On the other hand, there are many points in which they differ, and it is by seizing on these that we are able to diagnose the one condition from the other, and to neutralize, so to speak, their many points of resemblance. These points of difference may be thus comparatively represented:

IN HEART-DISEASE.	IN ASTHMA.
The paroxysms are of a few minutes' duration.	The paroxysms may last for hours or even days.
The dyspnœa is of a gasping, panting kind, rather a breathlessness than a difficulty of breathing.	The breathing is tight, constricted, and difficult.
The respiration is hurried, the movement deep, and the rhythm not changed.	The respiration is often slow, the movements superficial, and the expiration prolonged.
The patient feels as if dying.	However difficult the breathing, the patient feels there is no danger.
There are commonly no bronchial *râles.*	The breathing is accompanied with prolonged, sibilant, and musical rhonchus, especially at expiration.
Exertion in tranquil breathing is an adequate immediate cause of a paroxysm.	Exertion alone will not immediately produce a paroxysm in tranquil breathing.
The paroxysm is not followed by expectoration.	Each paroxysm, as a rule, passes off with an access of expectoration.
The tendency of emotional excitement is to induce a paroxysm.	The tendency of emotional excitement is curative; often completely and suddenly.
No true periodicity.	Periodicity often well marked.

In some other points too, not easily expressed tabularly, the symptoms of the two diseases differ. In the paroxysm of cardiac dyspnœa, the sufferer often leaps from his bed, and finds himself standing on the floor, or at the window, open-eyed and gasping for breath, almost before he is awake. In asthma, the patient is either unable to move from his bed at all, or slowly creeps to his fireplace to light his fire, leaning on one piece of furniture after another as he creeps along. In both the diseases, the dyspnœa is worse after food, but in asthma this depends mainly on the quality of the food, while in heart-disease I think it depends mainly on the quantity. There are many things that the asthmatic dare not take without the certainty of bringing on an attack, but there are no articles of diet, that I know of, that have an especial tendency to induce dyspnœa of cardiac origin. There is a difference, too, in the time after taking food that the difficulty of breathing comes on; in heart-disease it is immediately after the meal; in asthma it is commonly about two hours after eating, when the results of digestion are entering the circulation. Again, with regard to frequency of the attacks, the two dyspnœas differ; in cardiac dyspnœa there is no limit to the frequency with which the paroxysms may appear—the patient may have fifty of them in a night; in asthma the rule is to have only one, rarely two, almost never more, while once a week and once a month are common frequencies; and the having of one attack seems of itself to secure an immunity for a certain interval afterward.

Although the dyspnœa of heart-disease is that which simulates asthma more closely than any other distinct dyspnœa, yet cases of heart-disease are not so often confounded with asthma as are cases of bronchitis, and for these two reasons: first, because with a great many people, especially in the lower and middle classes, bronchitis commonly goes by the name of asthma—an old man coughs, and spits, and wheezes, and tells you he is asthmatic. And secondly, because a great many cases of bronchitis are complicated with true asthma—bronchial spasm is an integral part of the condition; the patient has asthma, not because he has not bronchitis, *but* because he *has* bronchitis; his bronchial tubes contract *because* they are inflamed. The error, therefore, in such a case, does not lie in the recognition of the asthma, but in the non-recognition of the bronchitis which is the immediate cause of the asthma, and the substantive disease.

The principal points of contrast between bronchitis and pure asthma are the following:

IN BRONCHITIS.	IN ASTHMA.
The typical sounds are moist.	The typical sounds are dry.
Cough is always present.	Often there is no cough.
The winter is the worst time of the year, often the only time.	The hot weather of summer and autumn is the worst time of the year.
Cause catarrhal.	Cause emotional, dietetic, and various.
Sputum more or less purulent.	Sputum, if any, non-purulent.
Severe dyspnœa never evanescent.	The severest paroxysm may come and go quickly and suddenly.
Often ends in dropsy.	If uncomplicated, never produces dropsy.

If, in any case of chronic or recurrent difficult breathing, I feel a doubt as to whether the essential condition is bronchitis or asthma, the first question I put is, "Is your complaint a winter complaint?" If I get a negative answer, if I am told the season makes no difference, that it is as bad in summer as in winter, the thing is settled—it is *not* bronchitis. If, on the other hand, I get an affirmative answer, I see strong reason to suspect that bronchitis is present, and, if not uncomplicated, that is to say, if asthma is present as well, is at any rate the cause of the accompanying asthma. I then put these two additional questions: "Is cough a constant and troublesome part of the attacks?" "Do you expectorate much, and is the sputum thick and yellow?" If these questions are answered in the affirmative, then, beyond all doubt, the case is one of bronchitis; if they are answered in the negative, then, I think, it is certain that it is not bronchitis; and the fact that the first question was answered in the affirmative—that the attacks of difficult breathing are confined to the winter—merely shows that atmospheric sources of irritation, such as cold air, damp, and fog, are the chief excitants of the asthma. I do not think that after these three questions any possible doubt can remain as to the presence or absence of bronchitis. As to the presence or absence of asthma (the presence of bronchitis being granted) a doubt may remain, and in the further prosecution of this inquiry I shall say a word or two presently.

As for the distinction of the difficulty of breathing due to asthma from that due to emphysema, I think (supposing each to be uncomplicated by the other) the three following points of contrast would always suffice:

IN EMPHYSEMA.	IN ASTHMA.
Respiration is never free.	Respiration may be perfectly free in intervals.
Drumminess of chest unvarying.	Chest only drumming at paroxysms.
Intercostal depressions effaced.	Intercostal depressions strongly marked, especially at each inspiring effort.

2.—*Dysentery: its Successful Treatment by Large Doses of Ipecacuanha; also by a New Remedy.* By ARCHIBALD HEWAN, of Edinburgh, M. D. [Lancet, June 27, 1868.]

Mr. Hewan, after giving his own experience in the treatment of dysentery by large doses of ipecacuanha, which fully substantiate the results claimed by Dr. Maclean and others, calls attention to the remedy proposed by Mr. Kerr, of Galt, Canada West, and first described by him in the *Edinburgh Medical Journal* for June, 1865. He says:

> It was while enjoying the beautiful results of the ipecacuanha treatment, that I was called to attend the infant daughter of one of my fellow-missionaries. She had suffered now and again from diarrhœa during dentition. At length the diarrhœa took on a dysenteric character. All the usual remedies were tried, but failed. The ipecacuanha treatment remained. But what size of a dose should be given to so young a patient was the question, and not an easy one to settle. All at once her father, intensely anxious, recollected a packet of medicine for dysentery a kind friend of his had given him when he was starting for the coast. The nature of the remedy was then unknown to me, but, as Mr. Robb had entire confidence in his friend who gave it to him, and as the case was desperate, I could not withhold my full consent to its administration. Full instructions were written upon it. With much concern, I watched the case from day to day. The result was cheering. From the time the first dose was given, or very soon after, the child fell into a quiet and comfortable sleep, such as it had not had for many a day before. It soon completely recovered, and is now living, in Scotland with its parents, a vigorous and healthy child.

The remedy, as discovered by Mr. Kerr, is a composition of several plants, and at first sight may *seem* a very *unscientific* one. But as Mr. Kerr, in his interesting paper, which is worth reading, shows that he went to work on a scientific basis, spent five or six years in working out his plan before coming to a conclusion, and that conclusion a satisfactory one, as alleged by those who have adopted it, it is, in my humble opinion, worth a careful trial as a means of cure in this dire disease. And I the more gladly take notice of it in comparison with the ipecacuanha treatment which I have been advocating, for whereas, in the good results from ipecacuanha you have the preliminary horror of the dose, like results are to be obtained from this new composite remedy *without any sickening disgust.*

To quote from Mr. Kerr's paper: "Its constituents, when the investigation was concluded, were as follows: four officinal—viz., opium, stramonium, dulcamara, digitalis; three non-officinal, sium lunare, cicuta maculata, conio-selinum canadense. All are more or less narcotic, and digitalis, dulcamara, and sium lunare, are also diuretic. Without opium the combination is slightly aperient, promotes sleep, and, according to experience gained in dysentery and other diseases, heals ulceration of the mucous membrane." After some further interesting remarks, Mr. Kerr gives details of cases which were cured in his hands, as well as in those of other practitioners. They are too lengthy for quotation. So also are the details I have received from friends who have used the remedy, and who speak in the highest terms of its value, as having saved the lives of patients who seemed to be fast sinking under other more usual remedies.

From these, I trust not too brief details, as well as from my own experience abroad, and in a recent case here, I feel bound to advocate and to publish this new remedy, while I also try to make the value of the ipecacuanha treatment, if possible, better known.

3.—*Cure of Saccharine Diabetes by Opium, without Restriction in Diet.* [British Medical Journal, January 9, 1869.]

At a late meeting of the Clinical Society of London, Dr. Pavy narrated the following interesting histories of cases in his own practice:

A female, aged sixty-eight, was admitted under his care into Guy's Hospital, on May 26, 1868. Her complaint had been recognized two years, and at one time she had been passing an exceedingly large quantity of urine, and had been gradually losing flesh and strength. Upon admission into the hospital, the quantity of urine was about five pints a day, and was highly charged with sugar. She was placed upon the ordinary middle diet of the hospital, which included bread, potatoes, and beer. She was also ordered four ounces of brandy, and two bottles of soda-water, daily. This diet was continued so long as she remained in the hospital. Upon the day of admission, a draught was ordered, consisting of ten grains of bicarbonate of potash, half a drachm of aromatic spirit of amonia, and an ounce of infusion of calumba; to be taken three times a day. This draught was, by misunderstanding, continued throughout the patient's stay in hospital. Opium was given in the form of a pill, three times a day, and the dose was gradually increased. A daily examination of the urine was made, and the results were copied into tables. At first, the quantity of urine was 100 ounces, the specific gravity 1,040, the quantity of sugar per ounce thirty-two and three-quarters grains, and the quantity of sugar, for the twenty-four hours, 3,275 grains. The first effect of the opium was to diminish notably the amount of urine. The degree of saturation with sugar remained for a time about the same, but, through the fall in the amount of urine, the quantity of sugar for the twenty-four hours was diminished. Within three weeks, the quantity of opium administered was raised to ten and a half grains daily. It was then suddenly discontinued, on account of a greater degree of drowsiness than was desirable being produced; but, in a few days, was recommenced, and this time, being more gradually increased, was borne without producing any disturbance. On July 28th, the quantity of urine was twenty-five ounces daily, the specific gravity 1,027, and no sugar was passed. On the three subsequent days there was a little sugar, but it afterward disappeared, and remained absent as long as she continued in the hospital, viz., until October 28th. When the sugar disappeared, the patient was taking nine grains of opium daily. It was afterward further increased to twelve grains, and then gradually diminished until October 17th, when all was taken off, the patient during the remaining time taking no medicine, and passing no sugar. The last daily record was forty ounces of urine in the twenty-four hours; specific gravity, 1,025; and no sugar. With the improvement in the state of the urine there was a corresponding improvement in the health and strength of the patient, who ultimately expressed herself as feeling perfectly well in every respect. Upon being discharged, she lived precisely as she was in the habit of doing before she became affected, and had come to the hospital several times; the urine being, on each occasion, found devoid of sugar. Dr. Pavy brought to the society some urine passed on that day, which, upon being tested with the cupro-potassic solution, was seen to be free from sugar. Dr. Pavy had given opium and morphia in other cases; and the results strikingly exemplified the controlling influence of the drug over the disease. One was a middle-aged man, who was suffering from a severe form of the complaint. By restriction in diet, the quantity of sugar had been reduced to about 1,200 and 1,500 grains a day. Opium was then administered alone, in gradually increasing doses up to eighteen grains, daily, when the urine was found to have become devoid of sugar. The opium was then suddenly discontinued, and an ounce of camphor mixture given three times a day. The urine, when the opium was discontinued, amounted to thirty ounces daily; its specific gravity was 1,025, and it contained no sugar. On the following day it contained a trace of sugar; the third day, 140 grains were passed; the fourth day, 120 grains; the fifth day, 340 grains; the sixth day, 800 grains; the seventh day, 402 grains; the eighth day, 1,060 grains; the ninth day, 680 grains; the tenth day, 612 grains; the eleventh day, 720 grains; the twelfth day, 1,712 grains; the thirteenth day, 1,162 grains; and the fourteenth day, 1,440 grains—when the quantity of urine amounted to sixty ounces for the twenty-four hours, and its specific gravity was 1,038. The opium was now resumed, and the daily dose increased, until, as before, it amounted to eighteen grains. The urine was now reduced in quantity to thirty-five ounces per diem; its specific gravity was 1,033, and the sugar passed amounted to 368 grains. On the following day, the urine was forty ounces in quantity, and the amount of sugar passed 250 grains. On the third day, quantity of urine thirty-five ounces, with only a trace of sugar present. On the fourth day, quantity of urine forty ounces; specific gravity, 1,021, and no sugar. After the period mentioned, a little sugar was again passed, and it was found that the patient was not adhering strictly to the diet that had been ordered. Dr. Pavy had seen him since his discharge from the hospital. On returning home, he discontinued all medicine, and paid no attention to diet, and, as was to be anticipated, his urine was again charged with sugar.—The other case was that of a patient who was passing, upon a mixed diet, from eight to ten pints of urine a day, containing about 8,000 and 9,000 grains of sugar. By a restricted diet and an alkaline mixture, the urine was reduced to four and five pints daily, and the sugar to about 1,500 grains. The mixture was discontinued, and hydrochlorate of morphia given, at first in half-grain doses three times a day. The dose was increased, until in about two months nine grains were given daily. The urine fluctuated now between three and four pints a day; and the specific gravity had descended from 1,028 and 1,030 to 1,018 and 1,020. The urine also had become devoid of sugar. McGregor, as far back as 1837, had published in the *London Medical Gazette* a record of two cases in which opium had been given in large doses, with the effect of producing for a time a marked palliation of the disease. McGregor, in one of his cases, had increased the quantity of opium until it reached ninety grains daily. By modern practitioners, opium had also been generally looked upon as exerting a favorable influence in the disease; but he was not aware that direct evidence of its controlling influence, such as was supplied by his communication, had been previously placed upon record. There was still, he thought, much to be learned about its extent of power in different cases. The belief was, from the case which formed the basis of his communication, and other experience that he had had, that it would be found sufficient in many instances, among elderly subjects, where the disease was observed to assume its mildest form, to check by itself the elimination of sugar. In young and middle-aged subjects, however, where the disease, as a rule, assumed a much more severe character, his experience was that, to obtain a similar effect, the restricted diet must be conjoined.

4.—*On the Treatment of Typhoid Fever.* By J. Burney Yeo, Resident Medical Tutor in Kings College, etc. [Medical Times and Gazette, February 1, 1868.]

If the case is seen at its outset, and before diarrhœa has set in, or when the diarrhœa is slight and there is not much abdominal pain, a mild saline purge should be administered—only one—for the purpose of sweeping away the vitiated secretions and any other offending matters that may be lodged in the intestinal canal. This is especially desirable, because I propose, in the subsequent treatment, to endeavor to lock up the bowels completely, for a time. From the administration of the purge till its complete operation, the patient should take simply a cooling saline mixture, such as the citrate of potash with the acetate of ammonia. After the action of the purge, the characteristic part of this treatment commences.

A solution of chlorine should be made by the action of strong hydrochloric acid on finely-powdered chlorate of potash. This is easily done by putting about one drachm of the powdered salt into a pint-bottle, and pouring upon it about two drachms of the strong acid. The gas will at once be given off in abundance. The mouth of the bottle should be stopped by the finger, and, after a short time, water added slowly, in small quantities, thoroughly shaking the bottle on each addition. By this process, a strong solution of chlorine will be obtained, acidulated with hydrochloric acid. It must be borne in mind that this solution rapidly spoils, and should be prepared fresh at least twice a day, owing to the tendency of the chlorine to combine with hydrogen and reconstitute hydrochloric acid. It must also be kept in the dark. This acid mixture is to be given the patient very freely—one or two tablespoonfuls every half-hour, or oftener. It may be sweetened with a little syrup.

Let me explain what I believe to be the action of this remedy:

During an attack of typhoid fever, we must regard the whole of the intestinal canal as a long sewer, into which the morbid offending material present in the circulating fluids is constantly being poured. For reasons which I will directly explain, we must not attempt to get rid of this sewage matter by driving it out of the body; we must even go so far as to check or arrest the natural efforts made for its expulsion. There is but one thing left for us to do—if we shut up these morbid products in the intestines, we must strive to render them innocuous. In short, we must disinfect our sewer. By the constant administration of a strong solution of chlorine by the mouth this purpose is, I believe, effected. Much of the solution, no doubt, gets absorbed by the vessels of the stomach, and enters the blood directly; but much also must get intimately mixed with the food, and the food becomes so thoroughly impregnated with it, that sufficient of the solution is carried along the alimentary canal to serve the purpose we have in view. If I had cases of this fever under my care at present, I should carry this principle still further, and I would inject into the intestines solutions of chlorine or weak solutions of carbolic acid in water.

The excess of hydrochloric acid in the mixture acts as a tonic and refrigerant, and assists in keeping up the powers of the system. It is often remarkable to observe how rapidly the tongue cleans when this remedy is taken, long before the other general symptoms of fever give way; as though it exerted, primarily, a cleansing action on the whole alimentary mucous membrane.

We know that the essential morbid phenomenon associated with typhoid fever, is a congested and inflammatory condition of a portion of the intestinal mucous membrane—that portion where the so-called glands of Peyer are situated. We also know that one of the chief dangers resulting from this disease, is due to this inflammation in Peyer's patches proceeding to ulceration and consequent hæmorrhage. The occurrence of this active and inflamed condition of the lower part of the ileum is manifested by the early onset of diarrhœa, and by great tenderness on pressure over the corresponding part of the abdominal walls. This inflammation and this diarrhœa are doubtless evidences of an attempt on the part of the system to throw off from the blood a morbid material which is present in it. On this account we are recommended by some physicians to try and assist Nature in her eliminative efforts. I believe it to be our duty to do precisely the opposite of this, viz., to strive to moderate and lessen this eliminative action, to keep it under control. It is this very process of elimination, as much as, or even more than, the presence of the poison in the blood, which produces the fatal result.

If we can, by any means in our power, arrest peristaltic action in the bowels, and keep them perfectly at rest, the elimination will still go on, slowly no doubt, but safely; and, while we keep the intestinal canal purified by disinfectants, the poisonous material thrown out into the general sewer of the system will be just as harmless as if it were out of the body; whereas, if the increased activity of the intestinal mucous membrane be not arrested or modified, the eliminative process goes on with fatal rapidity, portions of the mucous membrane become ulcerated and destroyed, and diarrhœa and hæmorrhage from the bowel reduce the patient's strength to so great an extent that he is no longer equal to struggle with the depressing influence of the poison in his blood. Or the poison may be eliminated, but, in the very process of rapid elimination, the vital powers of the patient are so severely taxed, that death is the inevitable issue. Elimination has been effected, but it has been effected at the cost of the patient's life.

In every case of typhoid fever, then, it is our duty to modify or arrest the increased activity of the intestinal mucous membrane. How is this to be done? In two ways: First, by the constant application of counter-irritants to the abdominal surface; not a mustard-plaster once or twice a day—this is of little use—but hot flannels soaked in warm turpentine should be kept constantly applied. Secondly, by the administration of enemata, of which I have found the following by far the most efficacious. The enema which I invariably prescribe for this purpose consists of (according to the age of the patient) from two to ten grains of Dover's powder, and from five to thirty grains of tannin, mixed with an ounce or two of mucilage. This is thrown into the bowel after each loose discharge, diminishing, of course, the quantity of Dover's powder if the injections have to be given more frequently than three times daily.

But it may be asked—What advantage is there in this particular form of enema? I will endeavor to explain. In the first place, there is the opium in the Dover's powder; this drug, I believe, acts much more satisfactorily, in these cases, when it is administered by the bowel, than when taken into the stomach, and I also consider that it acts better in the solid form than when in solution. If opium be thrown into the bowel in the form of powder, it is absorbed slowly by the intestinal veins; as it flows through these vessels toward the general circulation, I believe it exerts a calmative influence over the abdominal sympathetic nervous system, in a different and more direct manner, than it does when taken into the system in any other way, and it therefore also exerts a more soothing effect on the excited intestinal mucous membrane. And opium in powder is to be preferred to opium in solution, for the following reason: I had often observed that the administration ot an enema containing a full dose of laudanum, in these cases of typhoid fever, appeared to exercise a rapidly injurious effect on the central organs of the nervous system, and in one or two cases it appeared to have induced fatal coma. The slow and gradual absorption of the powdered drug proves a safeguard against such untoward accidents.

But we must not forget that we have another important ingredient in Dover's powder, and that is ipecacuanha. What is the action of this drug? "It retards the peristaltic action of the intestines, and lessens the secretions from the mucous membrane." (Aitken.) Lastly, as to the tannin; it is one of the best, perhaps the very best, astringent remedies we possess, and, in giving it in the form of an enema, you administer it in the most direct manner possible.

As to the use of stimulants, so far as my observations have gone, they should not be given in the early stages of the fever, or given only in small quantity—keep them as a reserve. Scarcely a case occurs in which they will not be needed at some period of its course. But, in giving large quantities of stimulants early in the disease, you not only influence, I believe injuriously, the course of the fever, but you exhaust a powerful restorative means, which you will miss in a later stage of the case. Stimulants are especially valuable in the congestion of the lungs, which so constantly accompanies the later stages of typhoid fever.

There are, of course, many details of treatment to which I have not alluded here—such as sponging the patient with vinegar and water, removing the patient from one bed to another, so that he changes the fever atmosphere surrounding his body twice at least in twenty-four hours, etc. With regard to the best means of dealing with the evacuations from the bowels, with the view of checking the spread of the disease, I imagine that a bedpan, constructed to contain conveniently a portion of fresh dry earth, which should be constantly renewed and buried after each evacuation, will prove most efficacious.

5.—*Apoplexy in a Boy Fifteen Years of Age.* By JUDSON B. ANDREWS, M. D. [American Journal of Insanity, January, 1869.]

J. M., aged fifteen. Nothing extraordinary or peculiar in physical development; was healthy during childhood; at school learned easily, and retained knowledge acquired. In disposition cheerful and kind, at home obedient, easy of control, and manifested no desire to seek improper associates. Suffered from no serious disease till April, 1868, when he had a severe attack of typhoid fever, and was sick for three months. During the course of the fever he was delirious about two weeks. Although he recovered, he did not regain his former degree of strength and flesh. At this time he gave evidence of mental disturbance in a marked change of disposition and conduct. Began to pilfer from the gardens of neighbors, sought evil associates, became profane, disobedient to his parents, irritable in temper. Struck a little sister without provocation ; and, when reproved and punished, exhibited strong paroxysms of anger; also danced and sang comic songs, all of which was contrary to his former life and habits. In August last, while at play, he was hit on the forehead by a stone thrown by a comrade. A flesh wound was inflicted penetrating to the bone. This afterward gave his parents considerable anxiety, as they feared the injury might be of a permanent character, and result in an increase of the cerebral disorder. The history, as given above, was obtained at the time of his admission to the asylum, in September, 1868. He replied readily and intelligently to questions, exhibited no peculiarities of speech or manner, was in a fair state of flesh, eyes bright, pupils dilated, countenance somewhat pale and anæmic, no complaint of headache or other bodily ailment. For a few days, patient gave no special indication of insanity, but soon became profane, put outside clothing in bath-tub to wash it; ate voraciously, and at times vomited food ; was contented and cheerful. On being spoken to, restrained himself, and afterward by his conduct gained the good-will and regard of all. He was obedient, and anxious to make himself useful. There was little change in physical condition and no marked evidence of disease. On the morning of the 12th of November, he asked to assist in some light work on the ward. After a few moments he suddenly complained of headache and pain in stomach, and was put to bed. He soon screamed, and passed into a convulsive state, in which there was opisthotonos, and bowels and bladder were evacuated. He immediately became maniacal, which condition lasted about two hours, then was rational and conversed freely, but complained of pain in his head. Countenance and lips were blanched, but there were no other signs of serious trouble. Said he felt at times as though he had swallowed tobacco. He continued thus till four P. M., when he died suddenly without convulsions. Autopsy, at request of friends, sixteen hours after death. Sub-arachnoid cavity was filled with thin layer of blood, which seemed to have escaped from vessels of pia mater, which were much congested. The hæmorrhagic effusion, although well marked over the convex surface of the hemispheres, was more abundant anteriorly and about the base of the brain. At the point of decussation of the optic nerves, there was a considerable quantity of clotted blood. The two lateral and also the third and fourth ventricles were filled with blood-clots and liquor sanguinis. The cerebral substance appeared normal in color and consistency, but the microscope revealed an advanced degeneracy of the walls of the blood-vessels. There were no evidences of injury to the skull or membranes beneath the part struck by the stone. (Notes of autopsy from report of Dr. E. R. Hun, special pathologist to the Asylum.)

There are several points of interest in the case reported above. Apoplexy in the young is extremely rare. Mushet, in an analysis of a large number of cases, finds but six occurring before the age of twenty. Abercrombie gives only one case of true apoplexy as early as the ninth year, and (Mushet) "it is evident from the symptoms and the 'effusion of coagulated blood enveloping the whole extent of the cord' that it was extension of hæmorrhage from the spine upward." Andral met with a case of cerebral hæmorrhage in a boy of twelve, and Copland with one in a patient of eighteen years. In none of these cases, so far as can be learned from the notes given, was the effusion as extensive as in this one. Whether the arterial degeneracy discovered in the cerebral vessels extended to the larger vessels of the body, we did not have the opportunity to ascertain. From this case, in which the actual disease developed was in such disparity with the mental disturbance manifested, should it occasion surprise that we often witness the most marked mental symptoms where the physical lesion may be inappreciable to any known method of examination? During the attack which terminated life, there was at no time a condition which could be called a state of coma, for, as we have stated, there was a blanched appearance of the countenance, and the patient conversed rationally and freely to the moment of death. May it not have been that in the morning there was a slight effusion from the meningeal vessels, which would account for the convulsion followed temporarily by maniacal symptoms, and that the large effusion was so suddenly poured out that it instantly destroyed life, thus realizing to its full extent the original and proper meaning of the term apoplexy?

6.—*On Addison's Disease.* [Editorial—Medical Times and Gazette. October 10, 1868.]

Dr. Jaccoud has recently contributed an admirable article on this subject to one of the large French medical dictionaries now in course of publication.[1] After a few remarks on the different names that he and others have suggested for this disease—as the "bronzed disease," "suprarenal melasma," "asthenic melanodermia," and "suprarenal asthenia"—he gives an abstract of 127 "observations on melanodermia accompanied with lesions of the suprarenal capsules," arranged in a tabular form. The first case in his table was observed by Bright, and recorded in 1829, while his last case is one described by Pitman in 1864. As in each case not only the name of the observer and reference to the publication in which it is recorded, but also to the sex and age of the patient, the duration of the illness, the antecedents and predominating symptoms independently of the melanodermia, the lesions of the capsules, and the other lesions independent of those of the capsules, are recorded in sufficient detail, it is obvious that the compilation of this table must have been the result of gigantic labor. He then gives similar tables of seventeen "observations on melanodermia without lesions of the suprarenal capsules," and of fifty-eight "observations of lesions of the capsules without melanodermia." Of the 202 cases included in these three tables the majority have been observed by English physicians, but America, France, Germany, Italy, Scandinavia, and Russia, have likewise afforded a considerable number. Without entering into the well-known symptoms of this disease, we shall give, as briefly as possible, some of the numerical results which the author has deduced from his tables. In the 127 cases in the first table, persistent vomiting was noticed in 74; hence, excepting asthenia, which was universally present, this symptom occupies the first place in the pathological characteristics. Lumbo-abdominal pains constituted the second predominating feature, being present in 71 cases, their most common seat being the true lumbar region, where it was noticed in 34 cases. Next in order to asthenia, vomiting, and lumbo-abdominal pains, there is great disturbance of the nervous system, showing itself in the varied forms of headache, convulsions, vertigo, delirium, and coma. Transitory headaches were very common, and in 11 cases this symptom was persistent. Convulsions, which were usually confined to one or two of the limbs, and sometimes to only a special group of muscles—as, for instance, the facial muscles or the flexors of the forearm—were noticed in 19 cases. No connection can be established between the headache or the convulsions and the stage of the disease, but coma and delirium are chiefly associated with its later stages. Excluding certain doubtful cases, delirium was noticed in 10 and coma in 12 cases. Vertigo was only specially mentioned in six cases, but a tendency to fainting was very common; and frequent, well-marked syncope was observed in nine cases. Emaciation was only noticed in 32 cases, most of which were also phthisical. In the only twelve cases in which the blood was examined, leucæmia was observed in eight, but Dr. Jaccoud is inclined to refer this condition to organic changes coincident with the suprarenal lesions, and not to changes in the capsules themselves. In 10 of the 127 cases the asthenia was throughout the disease the only symptom associated with the discoloration of the skin. In 111 of the cases, the discoloration of the skin was general and uniformly distributed, in 14 it was partial, and in two it occurred in patches; and it is worthy of notice that in all of these exceptional 16 cases the disease was complicated with other serious affections, as cancer or tubercle. The morbid brown coloring is not always limited to the skin; it is not unfrequently observed on the labial, buccal, and vaginal mucous membranes, and is very common in the lymphatic glands, the lungs, and the abdominal viscera. Brown patches have also been observed on the peritonæum. In one of the recorded cases, the nails, and in another the teeth, assumed the color of the skin; and in one instance the hair, which was previously chestnut, became black.

---

[1] "Bronzée (maladie) ou Maladie d'Addison." In the "Nouveau Dictionnaire de Médecine et Chirurgie Pratiques." Tome sixième. 1866. Pp. 676–773. Paris: Baillière. London: Baillière; and Williams and Norgate.

There seems to be no law regarding the duration of the disease, but, of the 94 cases in which it was noticed, the range of the disease varied from six weeks to nine years. If, however, we reject cases which are complicated with other serious diseases, we have left 28 cases of the pure affection in which the duration is noted, and in more than two-thirds of these (20 in 28) the length of the disease ranged from six weeks to a year, in two cases it extended to two years, and in six it exceeded that term. Of the 127 cases, 79 were males and 48 females. The limits of age were three and 69 years. Between the ages three and 10 years one case is recorded; between 10 and 20 there were 24 cases; between 20 and 30, 30 cases; between 30 and 40, 31 cases; between 40 and 50, 18 cases; and between 50 and 60, eight cases; after which age there were three cases.

From the second table of seventeen cases of melanodermia without lesions of the suprarenal capsules, our author comes to the conclusion that the skin-affection alone does not suffice to constitute the disease in question, but that other characteristic symptoms must be present. There is, he observes, nothing in this table which tends to disprove the conclusions drawn from the former one. In regard to the third table, comprising 58 cases in which there were lesions of the capsules without discoloration of the skin, he observes that in all but three there is an omission which singularly diminishes their value, nothing being recorded of any of the essential symptoms except the discoloration of the skin. He likewise brings forward other good reasons why no safe conclusions can be drawn from this table.

His remarks on treatment are brief but judicious. After noticing iron, bark, and tonic treatment generally, including some wines rich in alcohol—as, for example, Banyuls[1]—iodide of potassium, and the bromides, he suggests that in the early stage blisters or cauteries may be applied over the region of the capsules; and, if these prove useless, and the characteristic torpor of the last stage appears, recourse may be had to the local application of electricity, with the view of exciting the flagging excitability of the central nervous system. These views, however, appear to be merely hypothetical, and not to be based on experimental trial.

---

[1] Banyuls is a strong, sweet wine obtained from the department of the Eastern Pyrences; it contains about fifteen per cent. (by volume) of alcohol.

The memoir concludes with a very complete bibliography.

7.—*On the Treatment of Asthma by Belladonna.* By Hyde Salter, M. D. [Lancet, January 30, 1869.]

Dr. Hyde Salter believes one reason why belladonna has not had a greater reputation as a remedy for asthma is, that it has not been given in large enough doses. He thinks that, like lobelia, it must be given in doses sufficiently large to produce its physiological effects, otherwise we have no right to say that it has been fairly tried, or to conclude that is has been a failure if it has not achieved a cure. He thinks that to give ten minims three times a day in some mixture is simply worthless. He has seen now numberless cases in which both belladonna and lobelia have been consigned to the limbo of failures, when a fresh trial of them, on the plan of gradually increasing the doses till an ultimatum has been reached, has proved them to be perfectly successful remedies. Sometimes, but very rarely, belladonna will relieve asthma when given short of a physiological dose; sometimes, but still rarely, it fails to give any relief even when pushed to its full physiological effects; the common thing is for it to fail till so pushed, and then to succeed. When I find belladonna has only been taken in the ordinary small doses, without any increment, I always regard it as not having been tried at all.

The advantages of administering it in the way I have described are:

1. That, giving it at night, you bring the full force of the drug to bear upon the disease at the time at which it is most liable to come on, and thus, if you are successful, tide your patient over the critical time.

2. By gradually feeling your way up to the required dose, you are able ultimately to reach without fear a dose which you would be unwilling to prescribe without such a tentative approach.

3. In those cases in which the therapeutical dose is reached before the physiological—that is, in which the asthma yields before the sight or head is appreciably affected—it enables you to stop short as soon as relief is obtained, and thus spare your patient any of the disagreeable effects of the drug.

4. By giving it only once in the twenty-four hours, you are able to give a larger dose than you would be able to do if oftener repeated.

5. By confining the dose to bedtime, the patient's days are, in spite of a large dose, passed in comfort; for, as the morning advances, the dulness of head, confusion of sight, and drought of mouth pass away.

6. You are thus enabled to find out what is the dose for the individual—a very important point. People differ very much in their tolerance of belladonna. Some of my patients have been unable to take more than twenty minims once in the twenty-four hours without very unpleasant symptoms; while I have known others able to take a drachm three times in the same interval without any inconvenience. And as they differ in their tolerance of the drug, so do they differ in the dose at which their asthma will yield. The only way to ascertain what that dose is, is to make each case a separate experiment, and this can only be done in the way I describe.

7. By giving the remedy three or four hours before the attack is likely to come on, the treatment becomes *prophylactic.* If, by taking a dose every night for thirty nights, the attacks have been for that time prevented, the patient has ceased to be an asthmatic for a month. This is a very different thing from having had thirty attacks in the same time which have

been cut short by the remedy. In all "habitual" diseases, in which the recurrence keeps up the tendency, prophylactic treatment has, in relation to final cure, a preëminence it does not possess in diseases in which habit has no place. For such diseases it is *the* treatment. It does more than spare your patient an attack of his malady; it breaks, *pro tanto*, that chain of sequences which is the very life of the morbid tendency.

8.—*On the Treatment of Typhoid Fever.* By W. Neftel, M. D. From a paper read before the New York Academy of Medicine, October 15, 1868. [Medical Record, November 16, 1868.]

It is not necessary to dwell long on the treatment of typhoid fever. We know that the degree of its intensity and danger to life depends on the high temperature. However the action of excessive heat upon our system may be explained theoretically—whether by producing some parenchymatous changes in the muscles (Zenker,[1] Waldeyer[2]), heart, nervous centres, or otherwise—for the practical physician there remains but one predominating indication, to subdue the heat. Hence every means of diminishing it must be resorted to, and the contrary avoided. We find a favorable change in the patient, and the thermometer shows a decline, after a mild aperient, or calomel, or digitalis, during the first stages of the disease; and a rising of temperature and increase of fever after stimulants. But for regulating the temperature of the body with mathematical precision, we possess but one means—cold in its various forms, and methodically applied.

Already in the last century James Currie had made extensive thermometrical observations, and introduced the rational treatment with cold water. My first acqaintance with the use of water in diseases was during the Crimean War in 1853. I was then attached as a physician to the Imperial Russian Guard, where a murderous epidemic of typhus fever prevailed, and with a most distressing figure of mortality, resisting all our efforts to subdue it by every known method of treatment. Following then only the instinct of the patients, and watching closely the immediate effect of cold water, I soon began to appreciate its beneficial influence upon the course and termination of the disease, and commenced treating all the cases with cold sponging and affusions. The result surpassed my hopes, and was far better than that obtained by any other method. I was myself attacked by the disease, and was saved from death only by my own mode of treatment. But still my treatment then was purely empirical and symptomatic.

In 1861 Brand[3] published his first monograph on the treatment of typhoid fever with water. Jürgensen[4] and Liebermeister[5] confirmed his method by scientific investigations; and in the large hospitals of St. Petersburg this plan of treatment has been tested on a wide scale, and with excellent results, by Zdekauer,[6] Grünewaldt, Rauchfuss, and others.

Brand's principal rule is never to allow the temperature to rise above 39.5° (103.1° F.); and, as soon as it comes to it, immediately to cool the patient according to the degree wanted. The mildest degree of cooling is attained by sponging the body with cold water, or by keeping the patient continually in a wet sheet, or again by a full tepid bath, and especially with cold water gradually added to it; the next degree by a tepid half-bath with cold affusions; the highest degree by cold affusions, shower-bath, or cold bath with cold affusions.[1]

---

[1] F. A. Zenker: Ueber die Veränderungen der Willkrülichen Muskeln im Typhus Abdominalis. Leipzig, 1864.

[2] Waldeyer: Ueber die Veränderungen der Quergestreiften Muskeln bei der Entzündung u. d. Typhus-process. Virchow's Archiv, Bd. 34, p. 473.

[3] Brand: Die Heilung des Typhus. Berlin, 1868.

[4] Jürgensen: Klinische Studien über die Behandlung des Abdominaltyphus mittelst dest kalten Wassers. Leipzig, 1866.

[5] Deutsch Archiv für Klin. Med. Bd. I., IV., pp. 413–435.

[6] Petersburg Med. Zeitschrift, 1864, p. 47.

The treatment is as follows: Brand[2] gives his patients a tepid half-bath with cold affusions four or six times per day. As the greatest heat occurs from 10 to 12 A. M., and from 4 to 6 P. M., a bath is given just before 10 and before 4 o'clock, and besides, at every other time when the thermometer shows 39.5° (103.1° F.). The patient is left in the bath from five to fifteen minutes. The cold bath diminishes the temperature of the body from 1° to 3° (1.8°—5.4° F.), according to its intensity and duration. In order that the evaporation of water should continue to produce cold, the patient is not dried after the baths, between which he is occasionally sponged over. A wet cloth is laid on the head, and another on the chest and abdomen, so that a continual refrigeration is kept up on one third of the body. Every quarter of an hour, if the patient is not asleep, he is offered a little cold water to drink, and, every three hours, nourishing food in a fluid state. The room is kept well ventilated, and stimulants are avoided, unless a collapse should take place; that, however, does not occur under this treatment.

The effect of this treatment is so wonderful, that those familiar with typhoid patients will not recognize them. By keeping the temperature below 39.5° (103.1° F.) the exacerbations are avoided and the fever kept in a continuous remission. The patients are never unconscious, never delirious; the tongue always remains moist and clean; the bronchial catarrh is very slight; so is the diarrhœa, if any at all. There is no tympanites, no hæmorrhage, no complication, and we have every reason to believe that the intestinal ulcerations do not occur at all. The patients, aided by some one, have strength to walk to their bath; they have a good appetite, and very quiet, refreshing sleep. On coming out of the bath, they generally eat and take a sleep. Under this treatment the course of typhoid fever is very mild and short, the convalescence very rapid, and the mortality none whatever (Brand). From my own experience, I may say, that a great number of patients, treated by myself according to this method, have all recovered without exception. In this city I had a patient, whose morning temperature once reached even 41.3° (106.34° F.)—a case absolutely fatal under every other treatment; she is nevertheless recovering.

As the principal seat of the affection is the intestinal canal, I generally begin the treatment with the administration of a mild aperient, to free it from the irritating contents. This is always followed by a diminution of the temperature. In the course of the fever I occasionally give injections of cold water, which, as I have observed, reduce the heat sometimes by a whole degree, to the greatest comfort of the patient. For all the rest, I strictly adhere to Brand's plan of treatment.

In this sketch I have tried to make manifest that the thermometer indicates with the greatest exactness the condition of the animal heat, the presence of fever, and its degree of intensity and danger. It traces the laws of the course of different types of disease; indicates the transitions from one stage to the other, the ameliorations and aggravations, and the return of the normal condition. It shows the effect of our remedies; enables us to form a correct diagnosis and prognosis; and gives us positive therapeutical indications.

---

[1] Brand: Op. cit., p. 61.

[2] Op. cit., p. 61.

Miscellaneous and Scientific Notes.

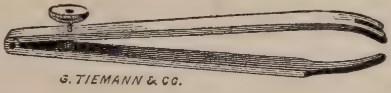
Journalistic Discourtesy.—In the April number of the *Richmond and Louisville Medical Journal*, there appeared a review of "The Prehistoric Ages of Scandinavia and the Lacustrine Dwellers in Switzerland. By T. S. Bell, M. D., of Louisville, Ky." This review, written by the editor of the journal, Dr. Gaillard, although somewhat severe, and evincing a tendency perhaps to hyper-criticism on minute points, was in no way discourteous or unjust. Nor could there be discerned, on reading this review, any personal *animus* against the author.

The June number of the *Nashville Medical Journal* contains a reply to this review, by Dr. Bell, and published over his own signature. This reply so abounds in virulent abuse and contemptible petty spite, that we can only wonder how it was ever admitted into the columns of a respectable journal. Had Dr. Bell contented himself with replying to the review, we could make no objection, provided, of course, the reviewer had misrepresented the author in any way; but he (Dr. Bell) has very little to say of the review, and devotes nearly the whole of a twenty-page article to a scurrilous attack on Dr. Gaillard's professional, public, and literary career. In so doing, he has forgotten his position as a gentleman, and has disgraced both himself and the profession of which he is a member. The journal also which admitted this personal abuse into its columns has, we think, committed a serious error, which should receive the out-spoken condemnation of all who desire to preserve the dignity and purity of our periodical literature.

Adulteration of Opium with Lead.—Dr. Risk, of Morgan, Ky., sends to the *Cincinnati Medical Repertory* a description of some opium, from which he was about to prepare the tincture. He found, in each five drachms of the so-called opium, twenty-two grains of metallic lead. If this sort of adulteration be common, we may expect no little damage from the use of this drug. The name of the vender of the drug is not given; otherwise, we should be most happy to help extending his reputation.

Editor New York Medical Journal:

I have devised the little instrument here represented, of full size, and manufactured by Tiemann & Co., with a view to aid the experiments which many surgeons are making in order to find some means of obviating, as far as possible, the dangers arising from the ligatures of large arteries, especially when their coats are more or less diseased.



It has been ascertained by experiments on animals, and on the human subject, that, when the coats of an artery are *compressed* merely (as for the cure of aneurism), instead of being tightly tied—and even when the current of blood is not *completely* arrested—coagulation within the sac ensues; and, at the same time, the danger of secondary hæmorrhage at the point of ligature is much diminished. Union by first intention is also usually to be expected, since no foreign substance is left long enough in the wound to excite suppuration. Various methods have been and are being devised to compass this important object. Those which have fallen under my observation are objectional, either on the ground of undue pressure on some point of the caliber of the artery, or that undue force or effort is required to detach the compressor from the vessel, and serious disturbance of the adhesions produced. I trust it may be found that the little instrument here offered to the profession for trial, will lessen, if it does not obviate, these difficulties.

The mode of using the instrument will occur to any surgeon at first sight, but may be described as follows: The sheath of the vessel having been sufficiently opened, as usual, the latter is to be slightly raised with a suitable forceps, and the blades of the compressor, opened, are to be passed over the vessel and pressed down, so that they may completely embrace it. They are then to be approximated to such a degree as merely to arrest the pulsation just below the point of constriction, or to restrict it to such a degree as the surgeon may think necessary. When this has been done the ends of the blades will be engaged beneath the vessel; the extremity of one within the notch of the other, to an extent just sufficient to prevent their slipping from the vessel. Were it not for this arrangement, the compressor, being so loosely applied, would be apt to become detached. The edges of the wound having been secured in the usual manner, it will be proper to apply a bridge or guard of some kind over that portion of the instrument which projects beyond the integument, as over any other of a similar kind, by means of plaster, or a bandage, to prevent its being disturbed in any way, especially during sleep. When it is expedient that it should be withdrawn, its smoothness and the slight curve of the blades will obviate any considerable disturbance of the wound. Yours,

FREDK. D. LENTE, M. D.

WE desire to call especial attention to the advertisement of Messrs. Kelly, Piet & Co., of Baltimore, relating to foreign medical journals. An opportunity is thus offered to secure any of these journals with very little trouble, and at a cost less than the subscriber himself can import them for. The *Practitioner* is reprinted by Messrs. Kelly & Piet, and is a fac-simile of the London edition. We will supply the *Practitioner* and the *New York Medical Journal* at $7 per annum.

SIMPLE MODE OF PERFORMING ARTIFICIAL RESPIRATION IN ASPHYXIATED CHILDREN.--Dr. C. Handfield Jones communicates to *The Practitioner* (March 1869) the following statement:

"During my presence at a confinement (in my own house), the child was born with several turns of the cord round its neck, and after it was released from these it lay with a swollen, livid face and no attempt at respiration. As soon as possible I laid it down on its back, and made pressure on its abdomen; then raised it upright on its seat; again laid it down and pressed the abdomen; again raised it upright, and so on. In the recumbent position the diaphragm was, of course, pushed upwards and expiration was imitated; in the sitting erect position the weight of the liver and abdominal viscera drew the muscles down, and inspiration was accomplished. The efficacy of the procedure was evinced in a very short time by the young gentleman making such vigorous use of his lungs that his cry was distinctly heard on the second floor below where he was. I do not think Dr. Marshall Hall's or Dr. Silvester's method could have answered better. Perhaps some practitioner may think it worth while to make a trial of this method."—*Am. Jour. Med. Sciences.*

WE are compelled, by the great length of the original communications in the present number, to omit a large amount of miscellaneous and bibliographical matter already in type.

ON behalf of the publishers, we respectfully request prompt remittance in answer to the bills which they are now sending out.

NEW YORK

MEDICAL JOURNAL:

A MONTHLY RECORD OF

MEDICINE AND THE COLLATERAL SCIENCES.

Vol. IX.] SEPTEMBER, 1869. [No. 6.

Original Communications.

Art. I.—*An Inquiry into the Pathology of Uterine Cancer, with Special Reference to the Significance of Certain Symptoms.* By William T. Lusk, M. D., New York.

There is no lack of literature upon uterine cancer. The extreme frequency[1] and grave consequences of the disease invited physicians, even before the days of professional gynecologists, to a serious study of its phenomena. At the present day the literature of the subject is derived from two sources: from the clinicists, who have succeeded in delineating in an admirable manner the sufferings of the living victims; and from the morbid anatomists, whose vision has been exclusively confined to the dead tissue submitted to them for examination. But, when we come to inquire into the pathology of the disease, or, in other words, into the physiology of the morbid structures, with a view to inform ourselves thereby as to the causes of the phenomena the disease presents, we find but little to satisfy or encourage us. A few scattered hints at long intervals, and often only suggestive of further inquiry, are all that reward the patient seeker. In the following review, it is my intention not to lose sight of the fact that as practical men we need something more than mere *post-mortem* records; and if, in so doing, we are forced to admit much that is still obscure, uncertain, and even contradictory, there remains to us the satisfaction that even glimpses of truth are better than total darkness.

---

[1] Lanchou (Recherches sur le Traitement médical des Tumeurs du Sein. Paris, 1844, p. 218) found that, out of 9,118 cases of cancer, 2,996 were seated in the uterus, or about 33 per cent. Virchow states the frequency in cases collected in Wurzburg, between 1852–'55, at 18.5 per cent. (v. Krankhafte Geschwülste, p. 82). Out of 11,662 persons who died in England of cancer, between 1838 and 1842 inclusive, and of which 2,916 were men, nearly 3,000 had cancer of the womb. (Simpson, Clinical Lectures. Philadelphia, p. 42.) Out of 5,122 cases of death occurring in the hospitals in Prague, Vienna, and Leipsic, 441 were the result of cancer, and of these 113 were seated in the womb. (Wagner. Der Gebärmutter Krebs, Leipsic, 1858, p. 2.)

Grouped together under the common term cancer, we find a great variety of tumors, possessing certain common characters, such as a tendency to invade contiguous tissues, to multiply and become general throughout the body, to return after removal, and ultimately to destroy the life of the individual affected; while structurally they present marked differences, dependent upon the character of the tissue which has served as the point of departure.[1] These differences can only be properly appreciated by an exact knowledge of the texture of the organs in which these tumors are developed. We will, therefore, begin by briefly reviewing leading points in the *anatomy* of the *cervix uteri*, where, with exceptions so rare that we shall disregard them in this paper, the cancerous tumors of the womb are primarily seated.

As is well known, the substance of the organ is composed of muscular fibres, of the involuntary variety, between which is interposed, in normal conditions, a certain amount of young connective tissue. The mucous membrane, which is closely adherent to the muscular tissue, differs in character, according as we examine the part lining the cervical canal, or that which covers the portio vaginalis. *The mucous membrane lining* the *canal*, and limiting the external and internal orifices, is pale and thick, covered by a single layer of ciliated epithelium, and thrown into the numerous longitudinal and transverse folds known as the arbor vitæ uterina. Upon the free surfaces of these folds we find both papillæ and glandular follicles. The *papillæ,* which are most numerous in the lower half or third of the cervical canal, are only exceptionally found in the neighborhood of the os internum. They have bulbous extremities, and taper toward the attached portions. They measure from $\frac{1}{200}$ to $\frac{1}{160}$ of an inch in length, from $\frac{1}{480}$ to $\frac{1}{260}$ of an inch in diameter below, and about $\frac{1}{200}$ of an inch at the swollen clavate extremities.[1] They are composed of connective tissue abundantly provided with nuclei, and are traversed by two capillaries, terminating in loops, and derived from the plexuses which surround the glandular follicles. They are covered by a single layer of ciliated epithelium, and are not found exclusively upon the crests of the ridges, but down upon the sides in the spaces between them. *Simple gland tubes* are found upon the crests and sides of the folds, and upon those portions of the cervical canal in which folds do not exist. Their direction is either perpendicular to the surfaces upon which they open, or directed obliquely toward the os externum. By their side we may find a few glands terminating in from two to five *culs-de-sac.* The simple glands measure from $\frac{1}{160}$ to $\frac{1}{120}$ of an inch in length. The *cul-de-sac,* which is somewhat wider than the neck, measures from $\frac{1}{480}$ to $\frac{1}{300}$ of an inch in diameter. The surrounding tissue consists of connective-tissue fibres, and anastomosing corpuscles running parallel to the surface of the gland. The membrana propria is thin, and lined with cylindrical cells, which are considerably smaller than those covering the surface of the mucous membrane. Glands with multiple *culs-de-sac,* of similar structure, measuring from $\frac{1}{70}$th to $\frac{1}{16}$th of an inch in length, and from $\frac{1}{120}$ to $\frac{1}{96}$th of an inch in breadth,[2] are found most completely developed at the bottom of the spaces between the ridges. The glands of the cervical canal secrete a sticky, transparent liquid, of a whitish or amber color, which fills up the spaces between the folds. *The mucous membrane of the vaginal portion* is continuous with that of the vagina. It is covered with pavement, epithelium, many layers in thickness, the superficial cells being large, flattened, and polygonal, while the deeper layers are composed of small cells or nuclei. The papillæ are buried in the epithelial layers, and do not normally project above the mucous membrane. They possess but a single looped capillary vessel. The glands are few, and diminish in number as we pass from the orifice of the cervical canal. They are simple pear-shaped follicles, lined with cuboidal epithelium, and are from three to five times as long as those described in the cervical cavity.

---

[1] Robin. Dictionnaire de Médecine, Art. Cancer.

---

[1] Cornil. Sur la Muqueuse du Col utérin. Robin's Journal, 1864.

[2] Robin. Dict. de Médecine, Art. Uterus.

Classification.—The text-books divide malignant tumors of the uterus into cancer and cancroid, including, under cancer, scirrhus, and the medullary and colloid forms, while the milder appellation is bestowed upon cauliflower excrescence and corroding ulcer. Our present knowledge requires that this classification should be considerably modified. *Scirrhus*, for instance, does not probably exist as a primary disease of the cervix uteri. Rokitanski[1] admits its existence, but regards it as an extremely rare form. Wagner[2] claims to have met with a single case. Cornil,[3] out of fifty-two specimens, found no example of scirrhus. Kiwisch,[4] on the contrary, thought that three cases out of ten belonged to this variety, but his successor, Seyfert,[5] occupying the same field, has never met with a single instance. Klob[6] states that what has been regarded as scirrhus of the womb is the early stage of the tumor, and that, when the disease has led to the death of the patient, we find for the most part the marked medullary form. Far from being histologically distinct, the fibrous form passes, as the disease progresses, into medullary cancer. *Colloid cancer* is exceedingly rare. But few cases have been reported. It is not in itself a distinct species. The colloidal metamorphosis may attack any one of the group of tumors. The degeneration has in all probability its starting-point in the cell-elements of the tumor. A colloid cancer of the uterus is to be regarded simply as a cancerous tumor that has undergone the colloidal degeneration.[1] The term *cauliflower excrescence*, as has been pointed out by Virchow,[2] is good as descriptive of certain papillary growths, provided we understand by its use simply that these growths bear some resemblance to a cauliflower. We are not, however, to prejudge the nature of the tumor by its external appearance. Klob,[3] indeed, tells us that the "cauliflower excrescence" may be a papillary form of a cancroid growth, or a benignant tumor, or that it may for years exist as a harmless papillary growth, and then assume the characteristics of a cancroid tumor. With the naked eye we are unable to distinguish with certainty one of these forms from another. The so-called *ulcus rodens* seems to be an epithelial cancer which, from the newly-formed cells undergoing speedy death, occurs primitively in the form of an ulcer.[4]

---

[1] Pathologische Anatomie, vol. iii., p. 550.

[2] Der Gebärmutter Krebs, Leipsic, 1858, p. 31.

[3] Les Tumeurs épithéliales du Col utérin. Robin's Journal, 1864, p. 333.

[4] Klinische Verträge, vol. i., p. 518.

[5] MS. Notes of the Author, taken in summer of 1865.

[6] Pathol. Anatomie der Weiblich. Sexual. Organe, p. 179.

Thus we see that the usually accepted classification is based upon certain accidents of structure, which, moreover, are supposed to correspond to certain degrees in the scale of malignity. Now, the idea of basing a distinction between cancer and cancroid in the uterus upon differences of malignancy is wholly erroneous. Cornil[5] tells us that cancroid of the uterus often resembles cancerous tumors of the worst description, in outward appearance, in yielding a milky juice, in rapidity of development, in power of extension to neighboring parts, and in tendency to become general throughout the body. Thus of fifty-five tumors he found twenty-one presenting the characteristics of cancroid, and thirty-four those of medullary cancer. The histories showed that in both forms the cases had run an equally rapid and fatal course.[1]

---

[1] Klob. Pathologische Anatomie der Weiblich. Sexual. Organe. Vienna, 1864, p. 183. Wagner. Die Nicht Specifität des Gallert-Krebs, Arch. der Heilkünde, 1862, ii., p. 143. Lücke. Handbuch der Chirurgie (Pitha und Billroth). Art. Geschwülste, p. 19. Koester. Die Entwickelung der Carcinome, 1 Abth. Wurzburg, 1869, p. 70, *et seq.*

[2] Krankhafte Geschwülste, vol i., p. 11.

[3] Klob. Op. cit., p. 175, *et seq.* Vide et Paget. Surgical Pathology, p. 717. Virchow über Cancroide und papilläre Geschwülste. Verhandl. der Phys. und Med. Gesellschaft, zu Wurzburg, vol. i., p. 106.

[4] Lücke, op. cit., p. 29.

[5] Cornil. Les Tumeurs épithél. du Col utérin. Robin's Journal, 1864, p. 476.

How, then, shall we distinguish in the uterus between true cancer and the cancroidal tumor? Not very long ago the prompt reply would have been returned, "by means of the cancer-cell." But a study of the normal elements has shown that all the so-called cancer-cells have their prototypes in physiological degenerations of epithelium. To be sure, in typical cases, as in scirrhus of the breast, and epithelial cancer of the lip, the distinction is easy upon simple inspection Thus the cancroid of the lip has a more friable texture, and a pasty consistency. Upon pressure, it yields a thick cheesy liquid, containing white or yellowish vermiform filaments, which differs from the milky juice of cancer in not being miscible in water. Clinically the cancroid remains much longer a local malady, and has an infinitely less tendency to the production of secondary deposits. Again, in regard to minute structure, the two forms present wide differences: thus, in Schonberg, we find a connective-tissue framework of new formation, whose interlacing fibres circumscribe microscopic alveoli containing cells, and yielding upon pressure the characteristic milky juice; while in cancroid of the lip the alveoli are large, visible to the naked eye, and there is no stroma or framework. Now, a large portion of the tumors of the uterus which are habitually called cancer, and clinically behave as such, differ from cancroid of the skin only in the nature of their epithelium, which is the reproduction of the normal epithelium of the region, i. e., it is sometimes of the pavement variety, like that covering the portio vaginalis—sometimes cylindrical, like that of the cervical canal. But in cancer there is the same tendency to the reproduction of the cells of the normal tissue; and in both cancer and cancroid the cells are subject to similar alterations, so that it may eventually become impossible to determine to what variety of epithelium that contained in the tumor originally belonged. Nor is the mere presence of a connective-tissue framework sufficient to settle the distinction, for it is often difficult, especially in organs in which connective tissue is normally abundant, to determine whether the framework be really of new formation or not. Now, in malignant diseases of the cervix uteri, all these difficulties exist in special force, so that we find, among authors of greatest authority, one calling cancer what another designates cancroid. Wagner,[1] for instance, regards cancroid as, in general, a rare form, whereas Virchow considers that this form constitutes the majority of cases of so-called uterine cancer. The old distinction, then, between cancer and cancroid of the uterus seems hardly worth retaining. Scarcely any two pathologists mean, when they use the terms, the same thing.

---

[1] Cornil. Les Tumeurs épithél. du Col. utérin Robin's Journal, 1864, p. 485.

Cancer of the uterus presents three varieties:

1. Tumors possessing a framework of connective-tissue fibres, which interlace so as to form fine meshes filled with polymorphous cells, the cylindrical predominating. If you choose, you may rank this variety as medullary cancer.

2. Tumors with alveoli, presenting a glandlike arrangement, particularly described by Wagner,[2] and shown by Cornil[3] to correspond to the third variety of Robin's "tumeurs heteradéniques."

3. Tumors, with alveoli visible to the naked eye, and lined with cylindrical epithelium (Foerster's cylinder-epithelial krebs).

In a clinical point of view these forms may be regarded as identical; the two latter, however, present a strong analogy to cancroidal tumors in other parts of the body. This fact enables us to recognize the importance of the seat of disease as an element of prognosis. Let us take, for example, a cancroid tumor of the cheek, which may exist for years without making sensible progress, while another of similar structure upon the lip, exposed to frequent irritation, may prove speedily fatal, and a third, seated in the cervix uteri, is scarcely inferior in gravity to the most malignant form of cancer.[4]

---

[1] Der Gebärmutter Krebs, p. 30.

[2] Op. cit., p. 150.

[3] Cornil, op. cit., p. 485.

[4] Du Cancer et de ses Caractères Anat. Cornil (Prix Portal), p. 355.

Pathological Anatomy.—The first form, which we have already noticed as being comparable to the medullary variety of cancer, presents the appearance of a soft, whitish, granulated tissue, covered, when ulcerated, with an abundant lactescent fluid, miscible in water. A similar fluid is yielded when a cut surface of the tumor is either compressed or scraped with the blade of a scalpel. A framework of newly-formed connective tissue serves both as a support to the vessels which have undergone considerable development, and to enclose small alveolar cavities filled with epithelial cells. We find presented, in the latter, all those aberrations as to form and size which are so common in this class of tumors. Cornil regarded the greater number of his cases (thirty-four out of fifty-five) as belonging to medullary cancer. Wagner is of the opinion—in support of which, however, he adduces no statistics—that the medullary form (markschwamm) of the uterus is less common than the variety about to be described.

The second form is characterized by a structure analogous to glandular tissue. M. Robin has termed this form "tissu heteradénique," and regards it as a special morbid product, developed in regions habitually deprived of glands. He describes three varieties, in the third of which the epithelial masses form solid cylinders, without wall or central cavity, but are simply held together by a finely-granular, friable, amorphous matter. This third variety, further characterized by a crumbling texture, is the one, according to Cornil,[1] which we commonly find in uterine cancer. It gives rise to tumors which may attack one or both lips of the cervix uteri. The latter then become tumefied, granulated, and sometimes turned outward. Seen at a period near their *début*, they are of a whitish color, with a certain waxy transparency, and break down easily under the finger. They yield no juice when scraped, but the scalpel removes little grumous particles or white opaque filaments, which proceed from cylindrical cavities visible to the naked eye. The alveoli, upon vertical section, present the appearance of elongated tubes with lateral dilatations, resembling somewhat in structure the compound glands of the uterus. The filaments are separated from one another by a thin layer of the tissue in which they are developed, i. e., sometimes connective tissue, sometimes the muscular tissue of the uterus. Upon transverse section we find the alveoli completely filled with epithelium, the peripheral cells being implanted perpendicular to the wall. In this tissue the vessels are usually but slightly developed. It may give rise to tumors of considerable size, two to three inches in circumference.

---

[1] Tumeurs épithéliales du Col utérin. Robin's Journal, 1864, p. 485. Consult for excellent description of these tumors.

Epithelial cancer with cylindrical cells, our third form, is usually developed upon mucous membranes, covered normally with cylindrical epithelium. It is rare upon the cervix uteri, where the epithelium is both of the cylindrical and pavement variety. Cornil furnishes us with three cases, and Wagner with one, of this form in the uterus. It is characterized by alveolar cavities, visible to the naked eye, and hollowed out of preëxisting tissues. The alveoli are spherical, elliptical, or like elongated tubes, according as the section is made transversely, obliquely, or vertically. They are filled with cylindrical epithelium, implanted in the parietal layers, like cylindrical cells upon a mucous membrane, while, as they approach the centre, they become more irregular in form, and detached from one another. Often they become granular, or are converted into granular corpuscles. These tumors yield a milky fluid, miscible in water, and possess all the external features of medullary cancer. They differ, however, in the form of the cells, in the size of the alveoli, and in the absence of a connective-tissue framework.

Pathogenesis.—The question as to the origin of these tumors is one of the most puzzling riddles in pathology. Blastemists and cellular pathologists find here the favorite field on which to fight their battles.

The blastemic theory, born in Germany, but soon after naturalized in France, maintains that the first step in the formation of these tumors consists in the exudation into the tissues of a special amorphous liquid (blastema). Later, certain atoms, or constituent molecules contained in the liquid unite and form the cancerous elements. This theory, derived from Schwann's doctrines concerning cell-development, is the basis of M. Robin's doctrine of "genesis by substitution." In embryonic life, according to M. Robin, the vitelline spheres, resulting from the continued segmentation of the ovum, are not directly transformed into the cells of the blastodermic membrane, but first liquefy and then become replaced by newly-formed anatomical elements. This is what he terms "genesis by substitution."[1] In the same way, in certain tumors, the normal elements disappear, and are replaced by the elements which constitute the new tissue; only in this case the blastema is not visible, the new element immediately usurping the place of the old, in proportion as the latter disappears. The theory of blastemas hardly deserves the obloquy that has been heaped upon it by the *omnis cellula e cellulâ* school. The evidence of the transmutation of one cell into another is certainly not complete. M. Robin denies that this ever takes place. His doctrine of genesis simply affirms that, in certain cases, formed elements make their appearance in seemingly clear, structureless fluids, the process of the formation of these elements, previous to their attaining a certain stage of growth, being inaccessible to our present means of observation.

In Germany the blastemic theory never gained universal acceptance. Even when it was the reigning doctrine, there were embryologists who declared themselves unable to trace the origin of cells from blastemas in the embryo, and who regarded the extra-cellular origin of animal cells as no less improbable than the *generatio æquivoca* of organisms. Remak (1852) extended the doubt to the formation of cells in pathological tissues, and ventured the conjecture that one day they would be found to be directly derived from the normal tissues of the body.[2] Finally, Virchow propounded his doctrine of the continuous development of cells from one another. In the connective tissue and its equivalents, he declared that he had found the common stock of germs (keim stock) of the body, to which, as a general source, we may directly trace the development of new formations.[3] The formation of a neoplasm, according to Virchow, is ushered in by the repeated subdivision of the con-

---

[1] Vide Dict. de Médecine. Robin et Littré. Art. Substitution.

[2] Vide Thiersch. Epithelial Krebs, Leipsic, 1865, p. 28.

[3] Cellular Pathology, translated by Chance, p. 398.

nective-tissue corpuscles, the segmenting process continuing until there result whole rows of small cells. These are the formative cells of the succeeding new creation. At this period, however, we can discover no characteristic by which we determine their destiny. They are like embryonic cells, of which those that are to become brain behave precisely like those that are to become muscle. Then follows the stage of differentiation, when these formative cells become developed, "according to the particular nature of the irritation to which they are exposed," into widely different tissues. Thus, in one case, they may pass by gradual transitions into cylindrical or pavement epithelium; in another, they may secrete a certain quantity of intercellular substance, and give rise to connective tissue; or, still again, a part of the cells may become developed into connective tissue, while the rest may pass into epithelium. The reciprocal arrangement of these elements may vary, and we may have epithelium contained in alveolar spaces; or the neoplasm may present a remarkable resemblance to physiological organs, as the glands.[1] In this way the cancerous structure could be supposed to originate. The success of the new doctrine was astonishing. Pathologists greeted it with cordial approval. There were few doubters, and they were not held in very good repute. Yet *a priori* this cellular Darwinism was not one whit less mysterious or repugnant to reason than the "*generatio æquivoca*," all had united in rejecting. The question was, however, one of fact, and certainly the evidence seemed to sustain the new theory. Every one verified Virchow's observations. Not to see things as he saw them was a sign of blindness or conceit. For a time the triumph was complete, and it is only lately that symptoms of reaction have set in. Some recent observers, however, claim that the spherical nuclei resulting from the continued division of the connective-tissue cells can everywhere be distinguished from epithelial nuclei, and have failed to discover those transitional forms by which, in diagrams, the intimate connection between the two has been established. Thiersch[2] argues further, that "it is not probable that connective tissue can produce epithelium under pathological conditions, if this capacity be wanting under normal conditions," a capacity he denies to have been proven. Moreover, in the embryo, epithelium and connective tissue are derived from different layers of the blastodermic membrane, and both are present before these layers come into contact with one another.

---

[1] Cellular Pathology. Lec. xviii. and xix. Krankhafte Geschwülste. Lec. v., vol. i.

[2] Der Epithelial Krebs, Thiersch, Leipsic, 1865, p. 65.

Cornil[1] has carefully studied the early stages of uterine cancer, selecting for the purpose either a tumor at its *début*, or the peripheral (more recent) parts, or the secondary granulations in the serous membranes. In his medullary form, he tells us, a framework of new connective tissue exists from the first. In this, microscopic alveoli, isolated from one another, form, and become the receptacles of epithelial nuclei. These nuclei increase in number, and become surrounded by an amorphous granular atmosphere and a cell-membrane. The vessels traverse the spaces between the alveoli, but not in immediate contact with the cells, a third layer of connective tissue intervening. At this period the tumor is hard, and has sometimes been termed scirrhus. Later, however, the cells increase, and the alveoli enlarge. Then the connective tissue of the alveolar walls undergoes fatty degeneration, and two or three alveoli communicate together, so that a softening takes place. Cornil had an opportunity to examine two cases before ulceration occurred, and states that in both the first development of the neoplasm took place beneath the mucous membrane. He explains the presence of the nuclei and cells, in parts devoid of the same, by the French doctrine of genesis. Virchow makes the distinction between malignant growths and simple papillary or granular tumors to consist in the point that, in the former, the epithelium is derived not from preëxisting epithelium, but from connective tissue. Cornil, however, was unable to obtain preparations demonstrating the derivation of the epithelial constituents from the hypertrophy and hyperplasy of the connective-tissue cells. Indeed, they everywhere appeared very distinct and without intermediate forms. Thus, the connective-tissue nuclei were small, measuring from $\frac{1}{6000}$ to $\frac{1}{5000}$ of an inch in diameter, while the epithelial nuclei were ovoid and measured $\frac{1}{2800}$ of an inch in diameter. Moreover, the smaller nuclei appeared solidly united to fibres of connective tissue, while the larger were entirely free, and could be easily pressed from the alveolar cavities in which they were contained.

---

[1] Cornil, loc. cit., pp. 638, 643.

A considerable number of pathologists, at the present day, while holding to the doctrine of continuous development, have adopted Remak's proposition that "epithelium can only come from epithelium." Waldeyer[1] believes that there is no primary form of uterine cancer not derived from the glandular constituents of the organ. "If we consider," he says, "the folds and depressions of the mucous membrane lining the cervix uteri upon which the glandular tubules open, from which the cancerous collections are most commonly derived, we shall not find it strange that we so seldom discover, upon transverse or vertical sections, the direct connection between the cancerous masses and the gland-orifices. But, by taking pains and keeping close to the edge of the neoplasm, it is possible to make preparations showing that such connections really do exist." Waldeyer has a specimen with the external orifice of the gland still preserved, while the lower extremity and the lateral offshoots communicate with larger irregular collections of epithelial cells. To these collections he gives the name of "cancerous bodies" (Krebs Körper), and states that they are larger in the uterus than elsewhere. The epithelial cells are usually of the pavement variety, and occasionally cylindrical. In those forms of cancer in which the glandular arrangement was lost, Waldeyer found hardly any except large round cells, even where, in normal conditions, cylindrical cells had been present. Generally he found the cells embedded in pure connective tissue, though sometimes they were contained in the muscular substance of the uterus. The stroma, in the former case, is derived partly from proliferation of the connective tissue surrounding the glandular acini, and partly from that of the organ itself. According to the predominance of epithelium or stroma, and the departure more or less from the glandular type, we would have the different varieties constituted. Analogous observations, tending to support the epithelial origin of cancer, have been made in other parts of the body; as the breast, stomach (pylorus), kidney,[1] liver,[2] testicle,[3] and skin[4] (cancroid). Billroth,[5] once an advocate of the "cellular theory," regards a cancer as an epithelial neoplasm possessing generally a glandlike arrangement, to be distinguished, however, from simple glandular hypertrophy in its departure from the *original* gland-type.

---

[1] Ueber die Entwickelung der Carcinomen. Virchow's Arch., Nos. 3 and 4, 1868.

Thiersch, Billroth, and Waldeyer regard the epithelium of serous membranes and of vessels as elements belonging to connective tissue, to be shut out, therefore, from "true" epithelial tissues, which alone are capable of giving rise, says Waldeyer, to cancerous formations. This distinction is now disputed. Köster,[6] taking up an idea of V. Recklinghausen, proclaims the exclusive derivation of the cancroid tubules (cancroid zapfen) from lymphatics. In support of his position he calls attention to the striking resemblance of the anastomosing cell-cylinders, best seen in sections made through the peripheral portions of the tumor parallel to the surface, to a lymphatic net-work. Further, he claims, by means of staining the tissues with nitrate of silver, to have established the connection between the cell-cylinders and the lymphatics, and to have been able to trace the transition from cancer-cells to the delicate epithelium lining those vessels. Köster is probably too exclusive. It is not likely that all observations, previous to his own, have been, as he suggests, faultily made and interpreted; still he may be fairly considered to have opened a new field, worthy of further study. Robin[1] says that, in certain tumors, taking their origin from the serous membrane, the essential elements are really epithelium, and that the differences they present to that of other epithelial tumors correspond to the normal differences between the epithelial cells of serous membranes and those of the mucous membrane of glands.

---

[1] For origin in breast, stomach, and kidney, *vide* Waldeyer, loc. cit., and Cornil, "Sur l'Histoire du Développement des Tumeurs épithéliales. Robin's Journal, May and September, 1865.

[2] Naunyn. Ueber die Entwickelung der Liber Krebs. Reichert's and Dubois-Reymond's Journal, 1867.

[3] Brich-Hirschfeld. Zur Entwickelung der Hoden Krebs. Arch. der Heilkünde, No. 6, 1868.

[4] Thiersch. Der epithelial Krebs, 1865, and Cornil, loc. cit., No. 3, 1866.

[5] Billroth. "Die Geschwülste," Allg. Wiener Med. Zeitung, May 31, 1868. The tubular-gland form predominates in cancer. Frequently we see a crowd of tubes which all come from epithelial acini.

[6] Koster. Die Entwickelung der Carcinome. Wurzburg, 1869.

The Invasion of Neighboring Organs.—The further progress of the disease is the necessary consequence of the intimate connection of the uterus with the contiguous organs. It extends from the cervical mucous membrane to the muscular structure of the cervix, and upward toward the body of the uterus. The mucous membrane of the vagina becomes covered with secondary granulations. Generally, in *post-mortem* examinations, the limits between cervix and vagina can only be determined by their relations to the bladder and rectum. The cellular tissue around the upper part of the vagina and uterus, and between the folds of the broad ligaments, becomes invaded by glandlike tubes, or isolated granulations. Thence the disease spreads to the bladder and rectum, attacking successively the intermuscular and submucous connective tissue, and finally the mucous membrane. From the bladder it creeps upward to the apertures of the ureters. Sometimes both anterior and posterior *culs-de-sac* of the uterus become filled with cancerous deposits. The pelvic glands are always tumefied, and frequently transformed into a mass like the diseased structure of the primitive tumor. Single glands may attain the size of an apple ; a plexus may become the size of the fist, or even larger. Sometimes the ovaries are involved, though it is difficult in necroscopic examinations to determine whether a degenerated tumor glued to the postero-lateral surface of the uterus is an ovary or lymphatic gland.[2] Wagner found the ovaries reported as affected in twenty-two cases out of 171, in most of which the degeneration was propagated from the fundus uteri.[3] From the beginning of the malady, there is marked pelviperitonitis, with formation and organization of false membranes. In this way adhesions form between the Fallopian tubes and the adjacent organs, and the whole pelvic contents become at last reduced to a nearly solid immovable mass.

---

[1] Robin. Recherches anatomiques sur l'Épithélioma des Séreuses. Journal de l'Anat. et de la Phys. No. 3, 1869.

[2] Cornil. Tum. épithél. du Col utérin. Journal de l'Anatomie et de la Phys., 1864, p. 647.

[3] Wagner, loc. cit., p. 68.

Modes of Propagation.—Virchow[1] has shown that the growth of tumors takes place by the formation of fresh nodules about the periphery, or of detached groups at a certain distance from the original tumor. Now, if we adopt the theory of genesis, the mode of propagation presents no difficulty. Thus Cornil,[2] who has admirably described the glandular origin of cancer of the breast and pylorus, consisting, in the first stages, of hypergenesis of the gland-cells, filling up of the central cavity, and formation of lateral and terminal offshoots, ascribes the peripheral nodules to the consentaneous genesis of new glandular tissue. Now, in this explanation, the difficulty lies purely in the thing itself for which genesis stands. Virchow,[3] who has the merit of showing that the primitive tumor is the starting-point of infection, supposes a special pernicious juice to be generated by the primitive tumor, which extends by imbibition to the surrounding tissues, and awakens in them a series of changes terminating in the formation of neoplasms of the same character. These infectious juices are carried to the glands, and thence disseminated to distant parts by the lymphatics and veins. These juices, which have been compared to the poison of syphilis, are, however, very curious in this respect, that they give rise in the secondary nodules to precisely the same morphological constituents as those of the primitive tumors. To be sure, we not uncommonly find that the lymphatics proceeding from the tumor are filled for a considerable distance with so-called cancer-cells. Nor is it at all rare for masses of the tumor to penetrate into the calibre of veins, where they form soft vegetations, from which particles can hardly fail to be swept by the current of the circulation.[4] But Virchow supposes that in the dissemination of tumors the formed elements act simply as carriers of infection. Thiersch,[1] however, thinks we can hardly admit that a contagious material would be capable of imparting to cell-proliferation a distinct histological stamp, so that the tissue affected could assume the type of a widely-different order of development. On the contrary, he esteems it much more probable that, among the elements carried into the circulation, there would be some, in the process of multiplying at the moment of being swept away, which would hardly forfeit this faculty by a short transportation in a stream of blood or lymph. In such a case we would naturally find the same forms in the secondary as the primary seat of the disease. Waldeyer[2] describes a mode of epithelial emigration, which must play an important part in the production of secondary formations. At first, there is almost always a sharply-defined limit, composed of short cylindrical cells, about the epithelial products, but after a time the line of demarcation gives way, and narrow, cylindrical, or spindle-shaped passages form, containing long lines of epithelial elements, which can be followed far into the connective tissue, from whose corpuscles they may be easily distinguished. These passages or gaps Waldeyer regards as the starting-points of the lymphatics. Köster[3] denies that these lines of cells are the beginnings of metastases following the lymph-passages, but holds them to be themselves altered lymphatics, and to constitute an early stage in the course of cancerous development. If Köster's view be correct, that the epithelial elements of the secondary as well as the primary tumor are derived from the cells of lymphatics, the question whether metastases are due to the washing away of fluid or formed constituents becomes of inferior importance.

---

[1] Die Krankhafte Geschwülste, p. 50.

[2] Contributions à l'Histoire des Tum. épithél. May and Sept., 1865.

[3] Krankhafte Geschwülste. Lecture iii.

[4] Virchow, loc. cit., Lec. iii. *V.* et Lücke. Die Lehre von den Geschwülsten. Billroth und Pitha's Handbuch, p. 46, *et seq.*

Pain.—Sharp, lancinating pains are usually considered as pathognomonic of uterine cancer, yet this symptom belongs generally to an advanced stage of the disease. So far as it alone is concerned, the morbid process may assume formidable proportions, before it awakens the attention of either patient or physician. Courty,[1] in this connection, lays it down as a general axiom, which it behooves gynecologists to bear in mind: *nimium ne crede dolori.* At a later period, however, the tenderness upon pressure, and the reflex pains from these tumors, would lead us to anticipate some material lesion of the nerves. Cornil[2] (1864), whom we have so often quoted, has recently (1864) made a special study of the innervation of cancerous products, and has completely confirmed this anticipation. The lesions have their seat primarily in the neurilemma and perinerve, the nerve-tubes themselves being only secondarily affected. They may present, in the uterus, the following varieties: 1. The neurilemma is transformed into tissue similar to that of the epithelial neoplasm in which it is embedded, and from which it cannot be enucleated. 2. The nerve-trunks can be easily separated from the neoplasm, with which it has formed no attachments. It is then found to present in its course fusiform or spherical enlargements, due to hypertrophy, and hypergenesis of the neurilemma. Of the two varieties, the latter is by far the most common. In both, when the neurilemma was extensively affected, the medullary substance of a portion of the nerve-tubes was always found to have undergone granular degeneration, but the degeneration was never any thing but partial. This preservation of the larger number of nerve-tubes explains the peculiar symptomatology of these tumors which occasion pain and not paralysis. In certain cases, it is true, the power of motion has been found to some extent impaired, but this was where there was accompanying œdema of the limbs, and was not due to the lesions of the nerves alone. Patients, it may be mentioned, sometimes complain of subjective sensations of heat and cold in the painful member, while in reality the temperature does not differ from that of the healthy limb.

---

[1] Thiersch. Der Epithelial Krebs, pp. 45 and 72.

[2] Waldeyer. Ueber die Entwickelung der Carcinomen, pp. 496, 508. Virch. Arch., 1868.

[3] Köster, loc. cit., pp. 14, 15.

Ulceration and Hæmorrhage.—We have next to consider those retrograde changes which have been going on simultaneously with the origin, growth, and extension of the disease, and to which the latter owes its peculiarly destructive action.

---

[1] Courty. Maladies de l'Utérus. P. Asselin, Paris, 1866, p. 860.

[2] Cornil. Sur la Production de Tumeurs épithél. dans les Nerfs. Robin's Journal, 1864, p. 185.

In most instances uterine hæmorrhage is the earliest symptom to which the attention of the patient is attracted, but, occurring at the outset, where the woman has not passed the climacteric, in most cases at or near the menstrual period, it is often looked upon as simple menorrhagia. After the climacteric, the occasional recurrence of uterine hæmorrhage, so long as it is not very severe, would not alone excite serious apprehensions. In these early stages, hæmorrhage must be mainly attributed to disturbances in the circulation of the uterus, and is most pronounced in those cases where, from the beginning, or, in the progress of the disease, the mucous membrane of the body is invaded.[1]

Sometimes preceding, often accompanying, and invariably following hæmorrhage, we find certain leucorrhœal discharges, for the cause of which, as well as of the later hæmorrhages, we must study the processes of ulceration.

If we take a tumor of the glandular variety, after its début upon the anterior or posterior lip of the cervix, we find that, as it develops outward, it determines the exfoliation of the epithelium from the mucous membrane, and then the terminal extremities of the glandlike bodies are exposed in the form of whitish granulations. So far the epithelial cells contained in these acini are held together by amorphous matter. Now, however, they begin to undergo certain forms of degeneration. A vesicular condition may be induced by the formation of cavities in their midst, which contain, sometimes, one or more nuclei, or even fully-developed cells, but usually they are sterile. Virchow[2] regards this endogenous growth as a mode of generation, but Robin[3] insists that the vacuoles are a senile or morbid alteration, indicative of a retrograde process. They may be occasionally met with, in the form of uterine cancer we are considering, but are usually confined to a few cells.

---

[1] Courty, loc. cit., Art. Cancer.

[2] Cellular Pathology (translated by Chance), p. 401.

[3] Dict., Art. Épithélioma.

In the centre of the glandular tubes the cells are frequently spherical, and filled with fatty granulations. Once these forms were regarded as specific, and were thence termed cancer-cells, but they may be met with under physiological conditions, as in the bladder, placenta, etc. In the other parts of a tumor, at a period not too near its début, we may find, in some instances, occupying the centre of the gland-structures, concentric layers of epithelium (globes epidermiques), in all respects similar to those found in cancroid of the skin. This is likewise to be regarded as a form of retrograde metamorphosis. Cornil [1] and Waldeyer [2] have both pointed out that all these changes, viz., vesicular and fatty degenerations, and formation of epidermic globes, are peculiar to epithelium, and never occur in connective tissue, the nucleated elements of which preserve their form and size during the entire existence of the neoplasm.

As the cells pass into these various states, the amorphous matter, which has heretofore held them together, liquefies, and they become free, forming a whitish liquid—the juice secreted from the surface of the ulceration. As the more superficial constituents of the glandlike bodies thus dissolve away, the thin connective-tissue partitions remain, and float upon the surface in the form of delicate vascular fringes; or, where they are thicker, and the vessels of considerable size, they may resemble the granulations of a wound. At this period the lips of the cervix swell and turn outward. Sometimes the thickening of the walls obliterates the os and cavity of the cervix. Then the products of secretion accumulate in the uterine cavity, and distend it to the form of a pear, when the walls may become so thin as to yield a sense of fluctuation like a full bladder.[3] In the vaginal *culs-de-sac* the ulcerative process is the same, only here the reticulated disposition of the vessels gives rise to lozenge-shaped interspaces, bounded by red linear prominences, covered with small secondary granulations.

---

[1] Cornil. Tum. épithél. du Col utérin. Robin's Journal, 1864, p. 488, *et seq.*

[2] Waldeyer, loc. cit., p. 512.

[3] Cornil, loc. cit., p. 627. Cornil found this condition in two cases out of eighteen.

These prominences are formed of vessels covered by several layers of epithelial cells, of which the more superficial are in a state of fatty degeneration.

We have already seen how, in the so-called medullary tumors, as the cells increase in number, the connective-tissue partitions give way, and two or three alveoli communicate together. This is termed the softening of the tumor, and begins in the whitish granulations upon the surface of the cervix and vagina. These finally open, and the ulceration of the neoplasm begins. The vessels, which terminate in anastomotic loops, become free, and are surrounded only by connective tissue or epithelium remaining adherent to them, giving rise to their whitish filaments, which float when we place the tumor in water.

The peculiar form of tumor known as "cauliflower excrescence" is probably due to the ingrowing of the interpapillary masses of epithelium, while, at the same time, the papillæ enlarge and project beneath the surface of the mucous membrane. The epithelium above the papillæ is lifted up, becomes thinned, and finally ulcerates. Then the papillæ, thus set at liberty, grow freely in all possible directions.[1]

In uterine cancer, whatever form we choose, we find ulceration attended by either papillary granulations, or fungosities, composed of dilated vessels with thin walls, which rupture with the greatest facility. These terminate, sometimes, in loops, sometimes in club-shaped extremities. They are subject to a series of alterations, beginning with multiplication of their nuclei, by means of which their walls are thickened, and their central cavity strictured or obliterated; this is followed by arrest of the circulation, and ends in fatty molecular degeneration. Similar changes take place in the small vessels and capillaries within the tumor, and from the obliteration of the veins there result abolition of return circulation, and augmented pressure from behind, which is unquestionably one cause of rupture of the vessels and hæmorrhage. Sometimes, in larger arteries, the tunica adventitia may degenerate, the circulation continuing, but with more or less obstruction. At length a point is reached when the inner coat can no longer resist the shock of the blood-wave, and the blood escapes, giving rise, if the point of perforation be near the ulcerated surface, to considerable hæmorrhage.[1]

---

[1] Thiersch, loc. cit., p. 136. Waldeyer, loc. cit., p. 500. Cornil, loc. cit., p. 638, *et seq.*

Another result of these circulatory disturbances is sphacelation of the tissues deprived of the blood requisite for their nutrition. If one of the larger veins be obliterated, a considerable portion of the tumor mortifies. The chemical and molecular decomposition of the tumor is still further increased by the liquids from various sources that stagnate in the vaginal *culs-de-sac*, so that almost all old ulcerated epithelial tumors offer more or less extended portions in a state of moist gangrene. In this way the destructive action may extend to the body of the uterus, until only a rudiment of the fundus remains; communications may take place between the vagina and rectum on the one hand, and between the vagina and the bladder on the other; and, finally, the lymph-glands, which by this time have become adherent to the surrounding tissues, and to one another, may soften and ulcerate, and thus a large portion of the pelvic cavity may become converted into one vast cloaca, furnishing an ichorous, stinking, sanguinolent discharge.

Secondary Accidents.—In the progress of uterine cancer, certain accidents are liable to occur, which are only indirectly the results of the disease, but which are yet of primary importance, not only as regards symptoms, but as frequently involving life itself. Thus the compression of an artery by a growing tumor may give rise to *thrombi.* Venous thrombi are, however, much more frequent than arterial, and are found in about a third of all fatal cases. They may be due to compression, or large veins may be perforated, and a portion of the tumor, coming into direct contact with the blood, may give rise to coagula. In this way, veins may become obliterated, but the larger the vein, the longer the circulation continues, and, as the ingrowths are soft, they become pedicled by the washing of the blood in the calibre of the vessel. Here they increase in size, and are further augmented by the deposit[2] of coagula about them. Thrombi further owe their origin to the general marasmus almost always present in the last stages of uterine cancer, and to the weakened action of the heart, resulting partly from fatty degeneration, and partly from the frequent recurrence of profuse hæmorrhages. Venous thrombi may involve not only the utero-vaginal and vesical plexuses, but may extend to the crural and iliac veins.[1] As a consequence of the stoppage of the vessels, there results *œdema* of one or both lower extremities, usually of moderate intensity. This is not, however, the only cause of œdema, as very many cases seem traceable more especially to the hydræmic condition of the blood. Thrombosis, propagated to the vena cava inferior, is rare, and may then occasion *ascites.* Among the more remote consequences, is the formation of emboli in distant parts, of which the lungs are the most frequent seat, where they may give rise to pulmonary œdema, and lobular and lobar pneumonia. *Peritonitis* rarely fails as a complication. It is frequently partial, and attended with organization of false membranes. These often act as a conservative provision, protecting the peritonæum from perforation. When ulceration in the vaginal *culs-de-sac* reaches the sub-peritoneal connective tissue, suppuration or septic peritonitis, often extending over the entire abdomen, becomes developed, and proves speedily fatal. Inflammation of the peritonæum may, in other cases, arise from the softening and disintegration of secondary formations, in the coats of the bladder, rectum, Fallopian tubes, and in the pelvic glands, or it may result from consecutive diseases of the same tissues, not of a cancerous nature. *Periostitis* and *caries* occasionally occur as the result of softening of infiltrated glands and other pelvic tissues. *Catarrhal* and *dysenteric* conditions of the large intestine and *hyperæmia* of the rectum are very common. Most constant are non-cancerous lesions of the kidney and bladder. *Cystitis* and *urethritis* are nearly always observed previous to the perforation of the mucous membrane by the cancerous product. Partial or complete occlusion of the orifices of the ureters, giving rise to dilatation of the ureters, the pelves and calyces of the kidneys, and to some degree of *hydronephrosis*, has been frequently remarked. Cornil and Seyfert pronounce this feature to be rarely absent in late stages of the disease. Sometimes the kidney is atrophied, but generally it is pale, globular, anæmic, and semi-transparent, as if distended with urine. In rarer cases we may have albuminous nephritis from distention of the ureters, or pyelo-nephritis, when the pelves and calyces are filled with thick, cheesy pus. Very singular, in view of the prevailing ideas upon the subject of uræmia, is the absence, even in cases of total suppression of the urine, of the so-called uræmic convulsions. Seyfert[1] has been in the habit of employing this fact for years as an argument against the uræmic theory of eclampsia. Cornil[2] too remarks: "With these obstacles to the excretion of urine we expected uræmic symptoms to be manifested, but they were not. Although the attention of M. Charcot and myself was fixed upon this point, we never saw either the *epileptiform* convulsions, or the coma peculiar to uræmic poisoning." Isolated cases of a similar character are not unfrequently found reported in the current literature, and are usually accompanied with like expressions of surprise.

---

[1] Lücke, loc. cit., p. 36.

[2] Ibid.

---

[1] *Vide* Wagner, loc. cit., pp. 105, 106.

Metastases to remote regions are rare. They do, however, occur in the peritonæum, mesenteric glands, kidney, liver, lungs, and pleuræ. In the kidney these secondary deposits are of extreme rarity, so that we have been able to find but three cases recorded.[3] So far as regards the property of invading contiguous tissue, there is little choice between the different forms of uterine cancer. They all, too, have about the same average duration; but we find that these distant products occur much more frequently in cases of the medullary form, so that the latter approximates, in this expression of malignity, to true cancer in other parts of the body.[4]

In the term *cachexia* we have an expression for the general condition of the body to which the disease leads. It is induced alike by the different forms of uterine cancer. Hemorrhages induce anæmia and hydræmia, the products of decomposition are absorbed into the system, the processes of assimilation and nutrition are impaired by the deteriorated condition of the blood, and, as a result, the patient becomes thin, wan, yellow, and wrinkled. As these consequences do not occur so long as the tumor remains local, we are justified in assuming that the deleterious influence upon the organism is due, not to any specific infecting property of the tumor itself, but to the necrotic changes the latter undergoes.[1]

---

[1] Prager Viertel Jahrschrift, January, 1867. MS. notes in possession of the author.

[2] C. Les Tum. épithél. du Col utérin, p. 655, Robin's Journal, 1864.

[3] Case of Dittrich, *vide* Wagner, loc. cit., p. 95. Luys. Traité des Mal. utérines. Becquerel, t. i. Lusk. New York Med. Journal, June, 1867.

[4] Cornil, loc. cit., p. 647, *et seq.*

One word, in conclusion, with regard to the disposition of these tumors to return after removal. M. Robin[2] maintains that, so long as we are ignorant of the cause of the primary formation of pathological tissue, we have no right to assume that, in removing a tumor, we have likewise removed the cause itself. Yet the question seems simpler than that. Epithelial tumors have been extirpated, and a complete recovery, in rare instances, has taken place. In other instances, local immunity has existed for periods varying from a few months to years. Experience seems to indicate that these differences depend upon degrees in the diffusiveness of tumors. Upon a distinction of this kind is based the division of epithelial tumors into cancer and cancroid. Both forms possess, but in different degrees, the property of stretching into neighboring tissues, where, at distant points which seem perfectly healthy to the unaided eye, traces of the disease are still discoverable with the microscope. In view of these facts, it is impossible to give up the hope that, were we able to remove the last, smallest microscopic collection, we could thus prevent a local return; and that a time will come when, with improved methods of diagnosis, we will be able to recognize a stage in cancer when ablation will be equivalent to cure.

[1] Lücke, loc. cit., p. 55.

[2] Dict., Art. Récidive. The removal of a tumor, or the derma ulcerated in consequence of an excessive production and development of anatomical elements, is not to treat these affections, i. e., it is not to treat the general condition which is the cause of these phenomena. . . In fact, the generalization of tumors is nothing but a manifestation of a disease of a system giving rise to the hypergenesis of elements of such and such a kind in several points at once, or successively—elements which, in other circumstances, multiply in one place only to form a tumor . . . . . Anatomie microscopique des Tissus et des Sécrétions. Robin, Paris, 1869, pp. 111, 112.

Clinical Records from Private Practice.

I.—*Cases of Double Uterus.*[1] By Edward Hall, M. D., Auburn, New York.

So few opportunities occur, during life, for the observation and diagnosis of double uterus, and as this condition may frequently be the unsuspected cause of grave symptoms, not readily accounted for, by ordinary physical examinations, I trust the following cases will interest the gentlemen of this Association:

Mrs. D., aged thirty-nine, tall, of spare habit, dark complexion, and general good health, the mother of five children, the last two of whom were twins, consulted me for a cough, and prostration of the system. After a few weeks' care, I became aware that the pulmonary symptoms, though grave, were purely sympathetic, and probably from uterine irritation. I requested an examination, and found the usual condition following chronic congestion of the uterus, enlarged fundus, patulous and open neck, and mucous inflammation of the cavity.

After a year of patient care I had the satisfaction of seeing much improvement; but, on account of the continued mucous congestion, I kept up the intra-uterine applications from time to time. On one of these occasions, I discovered a small tumor on the right side. It was about the size of a uterus at three months' pregnancy. As the probe passed without the least obstruction about three inches into the cavity of the organ, and the diseased condition was rapidly improving for some time, I was undecided in regard to the locality of the tumor.

It steadily increased in size, remaining entirely upon the right side, but was not firmly fixed like an ovarian or fibrous tumor, and gradually became nodulated. After six weeks' careful examination, the probe passing further into the cavity at each examination, I began to distinguish through the integuments the form of a fœtus, and there was slight motion, which increased during the next four weeks. At the same time I was able to pass the probe into the uterus full five inches, without the slightest pain or inconvenience to the patient. The diagnosis indicates in this case one of two conditions: the open uterus, the perfect outlines of the child through the integuments, and its position entirely on the right side, all indicate extra-uterine fœtation. The entire absence of constitutional symptoms made it probable that there was a double uterus.

---

[1] Read before the Central New York Medical Association.

After these examinations the patient removed to her new home in New York, and I requested her to place herself under the care of Dr. Peaslee.

The following note from Dr. Peaslee finishes the history of this interesting case:

"*April* 5, 1867.

"I have seen your patient, and find her case one of intense interest."

"Every thing denotes a double uterus, and that the fœtus is in the right half, while the left half is elongated nearly as much as the right, and the os still patulous, as you describe. The partition or septum probably descends from the fundus to about the internal os, thus leaving most or all of the canal of the cervix free. It may be a case of extra-uterine fœtation, but I do not think so."

"6th. During the night the liquor amnii began to come away from the os uteri, which shows that it is not an extra-uterine fœtation."

She was delivered of a six-months' child during the night, and, I have learned from Dr. P., is again pregnant.

The Bulletin of the Academy of Medicine for May, 1867, contained a brief notice of this case.

Mrs. T., aged forty-five, of spare habit, blonde, was first married at the age of nineteen, and had three children during the first nine years; her last pregnancy was fourteen years ago, no miscarriage; nothing peculiar with either pregnancy; she recovered from each labor rapidly. Within a year after her last confinement, she suffered from congestion of the uterus and severe ulceration of the cervix, which lasted some months, but was finally cured. She has been married to her present husband eight years.

Her last menstrual period was June 25, 1868, and she left home on the 22d of July, for a visit of several months.

On the 11th of August she had a profuse hæmorrhage from the uterus, which came on suddenly, and without any known cause; it lasted about thirty minutes, during which time she lost between four and five pounds of blood. She recovered rapidly, and returned home on the 3d of October.

She began to enlarge, but did not suspect pregnancy.

On the 22d of October she first called on me for advice.

I found her abdomen slightly enlarged, with a discharge from the uterus, and some local irritation. I could distinguish a tumor entirely on the right side, movable, and not painful to the touch through the integuments.

On the 15th of November I made an examination per vaginam. The vagina was œdematous, the cervix enlarged and patulous, with epithelial sores on the surface.

The cervix was quite open, and the probe passed into the uterus over four inches without any inconvenience.

The uterus was easily moved, but the tumor moved with it.

My recent experience led me to diagnose a double uterus, with the right side impregnated, and, as motion became distinct in a few weeks, I was quite positive such was the condition.

About the 20th of December I asked for a consultation, and Dr. Briggs, of Auburn, was invited to see the patient with me. At this time the motion on the right side was almost incessant, accompanied by severe pain, and the tumor on the right side was as large as a four-months' pregnancy. On examination, there was the same appearance of the cervix as described above, but the probe passed into the uterus seven inches, and the wall on the right side was irregular. The tumor, as felt through the integuments, had the usual nodulated surface of an occupied uterus, though somewhat more distinct, and the walls seemed very thin.

There was no hesitation in deciding that this was a case of double or divided uterus.

This condition continued, with great suffering to the patient, the enlargement being confined to the right side, and steadily increasing until the 13th of February, when the waters broke.

I waited for labor-pains until the 15th, supporting the patient in every possible way.

On the 15th I made an examination with the speculum, and could pass the probe from five to six inches into the unoccupied portion of the uterus; then following the septum with the point of the probe down to the internal os, could slide the probe over the surface of the septum into the occupied cavity, and touch the head of the fœtus. By the aid of ergot and gentle manipulations I succeeded in arousing feeble pains, but not enough to expel the fœtus, which I was obliged to remove with long forceps, about sixty hours after the waters broke. Hæmorrhage was severe, and I found it necessary to remove the placenta, and use ergot, ice, etc., persistingly holding the uterus firmly in my hand, through the integuments, for about five hours. There seemed to be no power of contraction in the left side. The right side apparently did its duty, but the left remained quite lax for some days, and the least motion would excite flooding.

With the aid of ergot, nux vomica, etc., it began slowly to resume its tone, and in a few weeks became quite firm and healthy.

The patient made a slow recovery, suffering severely from phlegmasia of the right leg, but is now quite well.

The child appeared to be of seven months, was well formed, but never swallowed. The œsophagus appeared to be entirely closed, yet it lived ten days. The last two days it had severe spasms, which were relieved by the hypodermic syringe.

The literature in regard to this abnormal condition of the uterus is very meagre and unsatisfactory.

Rokitansky says that this septum is occasionally found reaching from fundus to cervix, at times dividing the cavity only half its depth, and in rare cases extending to the external orifice.

Dr. Rochester, of Buffalo, informed me recently that he found a case in the dissecting-room, where the septum came to the inner os, but knew nothing of the history of the subject.

Rokitansky says that these malformations generally occur associated with various irregularities of other organs.

In regard to pregnancy, he is positive that it may occur in either half, but there is a preponderance in favor of the right side, and that the use of only one set of nerves and vessels gives rise to much distress, abortions, and floodings.

Hodge, in his last work on obstetrics, mentions this deformity, and thinks that this condition may account for the difference in development sometimes noticed in twins, or the retention of one child in the uterus for some weeks after the other is born, and he refers to similar cases mentioned by Madame Boivin, Tyler Smith, Dr. Churchill, and others. This theory seems much more probable than that of Dr. Duncan, of Edinburgh, who thinks that there are orifices in the decidua, both at the os and near the Fallopian tubes, or of those who think that the decidua only occupies one turn of the uterus for a certain period, leaving the Fallopian tube open.

This last condition does no doubt sometimes occur, as I have known of two cases, where there was no doubt such was the case—one in the practice of Dr. Rochester, of Buffalo, and one in my own—but so rarely does this happen that the exception only proves the rule, that, before the fourth month, the ovum occupies the whole cavity of the uterus.

Todd's "Cyclopædia of Anatomy and Physiology" has a short article on this abnormal development, with some illustrations, which are of interest.

II.—*Case of Strangulated Ventral Hernia; Operation and Removal of two Fish-Bones from the Abdominal Cavity.*

By William R. Whitehead, M. D., of New York.

On the 23d of last March, I was sent for by Dr. E. B. Warner, the house-surgeon of the Northern Dispensary, to see a case of strangulated hernia. The patient, Mrs. C. R., aged fifty-three, mother of several children, after one of her confinements was troubled with two hernial tumors, one situated above the umbilicus, the other below it, and slightly to the left of the median line, about the junction of the umbilical and hypogastric regions. For the support of the lower hernia she usually wore an abdominal truss, but latterly it was worn out and useless. This hernia had two or three times before been slightly strangulated, but was readily reduced without assistance. On this occasion, however, the strangulation had existed for more than thirty-six hours, and the case was urgent. The hernia was about the size of a large apple, and rather flattened. No vomiting had occurred, but there was considerable pain about the seat of constriction. Persistent efforts at reduction of the hernia were unavailingly made with and without the aid of ether, by carefully seizing the tumor at its base, and exerting on it a properly-directed pressure upward and backward. Attempts at taxis having failed, it was decided to cut down to the constriction and relieve it; but previously I introduced the index-finger of one hand into the vagina, and made a bi-manual examination of the uterus and its contiguous parts. The patient being thoroughly etherized, assisted by Drs. Oscar Smith and Ross, physicians of the dispensary, I made an incision in the median line over the inner surface of the tumor, between the umbilicus and pubes, about four and half to five inches long. The escape of about a tablespoonful of yellow liquid from the hernial sac, on dividing it, reminded me, before completing the incision of the abdominal wall, to empty the bladder. It was immediately catheterized, and the operation resumed with very little loss of time. An opening into the abdominal cavity, about two and half inches long, was first made carefully with the knife, and afterward enlarged with a pair of stout scissors. The hernia was formed by a portion of the omentum, and the constriction was caused by a very tight fibrous band about two-thirds of an inch thick. Extensive incisions of the constricting parts were required to relieve the strangulation. While exploring the abdominal cavity with the index and middle fingers, I found in the region of the cæcum two foreign bodies close together, which felt like pins, but which, on removal, after some trouble, with Sim's needle-forceps, proved to be two codfish-bones, which had perforated the intestine. The history of these two bones was exceedingly obscure. The patient had, it seems, experienced some slight inflammatory trouble in the region of the cæcum some months before; but nothing definite was elicited by questions which

I made concerning the matter. A number of cases in which foreign bodies have been retained in a hernial protrusion of the intestine are mentioned by different authors, as J. L. Petit, Boismortier, Wincler, Carbonneau, and others.[1] Sometimes the cæcum is the seat of retention of such bodies, which are apt to occasion more or less serious inflammation of the adjacent parts. In making the incisions to relieve the strangulation, a portion of the small intestine protruded from the abdomen. The wound was protected as much as possible from the air, and the blood, of which there was very little lost, or escaped into the abdominal cavity, was gently sponged away with tepid water, containing carbolic acid. My own hands and those of the assistants were washed several times, during the operation, in water containing this antiseptic. The wound was brought together by means of the figure of eight and twisted sutures, and a soft compress, saturated with a strong solution of carbolic acid and sweet-oil, placed immediately over the sutures and kept in position with adhesive straps, and a cloth pinned around the abdomen. At one time during the operation, the patient's pulse rapidly became very much depressed, but rallied after a few swallows of whiskey-and-water. This sudden depression occurred while the effect of the ether was momentarily passing away, and instantly followed an extended incision with scissors for the relief of the strangulation. The sudden shock which is observed to follow an accidental lesion of the nerves of organic life, from abdominal wounds, was also exemplified in this case. In no operations, apparently, are the advantages of complete anesthæsia better shown than in those where the abdominal cavity is opened. The patient reacted well after the operation. She took two-thirds of a grain of sulphate of morphia. During the first twenty-four hours she drank brandy, brandy-whey, and beef-tea, in considerable quantities.

March 24th, nourishment and brandy were repeated. Pulse 112 to 116. She vomited several times, and each time the nourishment was rejected, but the brandy was retained. Nutritive injections were given to her, containing brandy and about thirty drops of McMunn's elixir of opium.

---

[1] De l'Étranglement dans les Hernies Abdominales, etc. Par Paul Broca. Thèse de Concours. Paris, 1857.

March 25th, pulse 116; she vomited frequently. No swelling of the abdomen, or much tenderness on pressure. No nourishment was retained in the stomach—only brandy-and-water was occasionally retained. The nutritive injections were repeated. At 2 o'clock, P. M., my colleague, Dr. F. A. Burrall, saw her with me, and we thought that her condition was rather favorable. I gave her an enema containing sixty drops of McMunn's elixir of opium, to procure sleep and to check the repeated vomiting; she slept pretty well until half-past 5 o'clock, P. M., when she vomited again on taking brandy-and-water. She was catheterized and received a nutritive injection, containing sixty drops more of the same narcotic. At 12 o'clock, P. M., she was sleeping quietly under the influence of the opiate, and her respiration was nearly normal.

March 26th, pulse 120, and full—nutritive injections repeated, and urine drawn off with catheter. At noon, the respiration was 15 to the minute; attempts to lower the respiration with opium, to keep in abeyance inflammation of the peritonæum, were abandoned during the early part of the preceding evening, when I considered that she had been sufficiently narcotized, although the quantity of opium administered during the treatment was quite inconsiderable compared with that often given in peritonitis, sometimes causing the respiration to descend to eight and six respirations a minute.[1] At one time I even entertained fears of the narcotism in this case, and it occurred to me that the attempt to keep down peritoneal inflammation with large and repeated doses of opium, by lowering the respiration, might so impair all the vital functions as seriously to endanger life from the narcotic effects of this drug. There was slight swelling of the abdomen. The pulse was 120 and regular up to about noon, when it increased a few beats. At 5 o'clock, P. M., the patient began rapidly to sink, and about 8 o'clock she died, seventy-nine hours after the operation. There is a way of relieving intussusception of the intestine by inverting the patient, and which I regret did not occur to me at the time I attempted taxis in this case of ventral hernia, but which was so tightly strangulated that I doubt whether the constriction could have been removed otherwise than by the knife; however, all simple means should be first tried. Recently I was called at 4 o'clock in the morning, to see a lady whom I am attending for a severe endometritis and uterine displacement, who was suddenly seized about four hours before with the most excruciating pain about the umbilicus, and accompanied with nausea; after careful examination, not being able to attribute the pain to her uterine trouble, to ovarian

---

[1] In the NEW YORK JOURNAL OF MEDICINE, 1855, vol. xiv., new series, p. 304, there is an extended reference to Prof. Alonzo Clark's treatment of puerperal peritonitis with opium, and to which my esteemed friend Prof. Isaac E. Taylor called my attention. Dr. Clark observes that "'the respiration appears to be the most certain indication of danger (in opium narcosis). I have not generally aimed to reduce it (respiration) below 12 to the minute. Yet in almost every case it has fallen, once or twice in the course of the treatment, as low as 7 and sometimes 5.'

"In private practice Dr. Clark has found not more than half or two-thirds of a grain of sulphate of morphia, every two hours, to be necessary, and he has generally begun with less, except for the first dose.

"No instance of fatal narcotism has been observed by him. In one case, where the patient was not accustomed to the use of opium or spirituous drinks, the most horrible dosing, as he justly remarks, was resorted to.

The most remarkable and interesting features of this case are, that the patient got well both of the disease and of the treatment, which it seems was commenced with two grains of opium hourly. During the first twenty-six hours this patient took sixty-eight grains of opium, and seven grains of sulphate of morphia, or in all what was equivalent to ninety-six grains of opium. During the second twenty-four hours, she took what was equal to 472 grains of opium. On the third day she took 236 grains. On the fourth day 120 grains. On the fifth day 54 grains. On the sixth day 22 grains, and on the seventh day 8 grains. In all 1,008 grains of opium; after which the opium was discontinued."

Dr. Clark remarks that "the results of the opium treatment in the hands of his professional friends in this city have not been uniformly successful. This was to have been expected when the path to success is so narrow and so little trodden, though beset with dangers on both sides; it is unavoidable that many will lose it."

Would it not be better altogether to avoid such dangerous, untrodden paths, and trust to less perilous means—keeping within the safer limits of the stimulant effects of opium, at the same time trusting more to Nature, and nutritive injections of the rectum, where the stomach is intolerant of food?

neuralgia, or to colic, I ascribed the symptoms to ileus. Acting upon this opinion, and assisted by a servant, I stood upon her bed, and, seizing her by the legs, inverted her while the servant made gentle and properly-directed pressure on the abdomen. At the second inversion the pain suddenly left her, and did not again return: a few drops of a solution of atropine which I put on a denuded surface caused by a blister, the day before, on the lower part of her abdomen, probably somewhat aided the effect of the inversion.

III.—*Acute Synovitis of the Knee-Joint; Suppuration. Treatment by Carbolic Acid.* By Walter Lambert, M. B., Amherstburg, Ontario, Canada.

On the 10th of June last, I was called to see William B., aged six, of strumous habit; had had coxalgia of the right hip-joint when he was between one and two years old. He was now suffering from inflammation of the right knee-joint, with effusion, and also enlargement of the inguinal glands of the same side. Was suffering great pain, particularly at night. Ordered: ℞. Potassii iodidi ʒ ss., potassæ bicarb. ʒ i., tinct. hyoscyami ʒ ii., aquæ dest. ℥ ii. Ft. sol. capiat. cochleare minimum sextis horis; the affected joint to be painted over with tinct. iodine twice a day, and supported with a flannel roller. This treatment was continued till the 17th, without much of any change, when Dr. Reynolds was called in consultation. The leg was now drawn up at a right angle, and could not be straightened, without causing great suffering to the patient. We now ordered warm alkaline fomentations to the knee; continue medicine already prescribed, and take ʒ i dose of cod-liver oil, ter-in-die. On Sunday, 20th, fluctuation was strongly marked, with considerable redness and swelling about the joint, and a tendency to point between the patella and external condyle. I then made an opening about an inch long, under the antiseptic veil, *à la mode de Lister*, having first dipped the point of the lancet in a solution of carbolic acid. About two ounces of thick pus escaped; after which a paste, made with carbolic acid, boiled linseed-oil, and whiting, was applied to the wound, and covered with tin-foil; the knee bandaged with slight pressure, the leg made straight, and the lad turned upon the right side. As his stomach rejected the oil, and the time had passed for the pot. iodidi to be of any service, we stopped them and ordered: ℞. Ferri phosphatis ʒiss.; acid. phosph. dil. ʒi; syrup. simp. ℥ii. Ft. sol. cap. coch. min. ter-in-die. Next day we found the patient free from all pain. Had slept well and was inclined to eat. On removing the dressings, we found the knee shrunken down nearly to its natural size. Some pus had escaped underneath the paste. The skin was slightly excoriated, on account of the veil having been saturated with too strong a solution of carbolic acid. For the next four days, we continued the paste, but each day made weaker. June 25th, swelling entirely gone, no pain even in flexion and extension of the joint; wound quite superficial and nearly healed. Ordered it to be dressed with calamine ointment. July 1st, still some superficial excoriation, but can walk with perfect ease. Ordered to keep quiet for another week.

I have thought this case worth reporting, from the fact that the patient so soon recovered from so serious a disease, and that he was a subject of strumous diathesis, with a tuberculous mother, and a father whose mother had died of phthisis.

Thanks be to Lister for the success thereof, and doubtless many thousands will thank him for the perfect recovery from a disease that would have otherwise necessitated amputation, or at least terminated in anchylosis.

As another instance of the healing properties of carbolic acid, I beg leave to mention that last winter I had a patient aged seventy-eight, with extensive caries of the tibia, the leg having numerous sinuses between the knee and ankle, with copious discharges therefrom, through each of which bone could be felt with a probe. Supposed cause: tertiary syphilis. Discharges from the bowels said to be like those from the leg. ℞. Pot. iodidi. grs. viii., ter-in-die; and sinuses in the leg to be freely syringed out with sol. of carbolic acid, ʒss. to the pint of water. In six weeks the leg was perfectly well, and her general health had so much improved as to enable her to go about her domestic service as usual.

IV.—*The Use of Oxygen Gas in Cases of Phthisis Pulmonalis.* By C. E. Hackley, M. D., New York.

Oxygen, in the form of *peroxide of hydrogen*, *ozonic ether*, *chlorate of potash*, etc., has been often given in phthisis pulmonalis and similar diseases.

Of peroxide of hydrogen Dr. B. W. Richardson says: "It is useful as a means of relief in dyspnœa, in cases where there are great destruction of the lung and deficient oxidation; but whether its effect is due to the direct addition of oxygen to the blood or to a sedative action on the nerve-centres, or to the promotion of secretion from the liver and kidneys and the removal of temporary congestion, is not known."

Oxygen gas has been administered with more or less benefit in various diseases, but I know of only a few recorded instances where its effects in phthisis pulmonalis have been described. This must be my excuse for the publication of a series of cases, some at least of whose imperfections I recognize, without having the means of correcting.

At the commencement of my term of service at the New York Hospital, in January, 1869, there were in the wards two cases of asthma, accompanied by emphysema of the lungs and great dyspnœa. In each of these cases oxygen gas had been once administered by Dr. A. H. Smith (as recorded in the New York Medical Journal for May, 1869), with the effect of very markedly diminishing temporarily the frequency of the respirations. As the dyspnœa found a constant cause in the emphysema, the effect was only temporary; but in an attack of spasmodic asthma the patient might, doubtless, very generally be relieved, and his attack probably shortened by inhalations from a bag of oxygen gas.

In February, we procured for the hospital an apparatus for making oxygen gas from chlorate of potash and black oxide of manganese, and a holder for storing it till it was required for use. Ten patients in various stages of consumption were placed for convenience in one ward.

The 15th of February, a record was commenced of the temperature in the axilla, and of the frequency of the respirations and pulse. These items were noted morning and evening, and the record was continued till the end of March, or until they left the hospital. The patients were also weighed at intervals, and it is to the change of weight (as indicating improvement or otherwise) that attention is especially requested.

Owing to unavoidable delays, the inhalations of the oxygen were not commenced till February 26th. During the preliminary observations and throughout the treatment by oxygen, the remedies previously used and habitually prescribed in this hospital were continued. They consisted of cod-liver oil, tonics, porter, cough-mixture, etc., *pro re nata.* It is true they had proved of little avail in these cases so far as they had been given, but it was not deemed proper to drop time-honored remedies to experiment with a new medicament.

Several of these patients having entered the hospital previous to, and all leaving it after the expiration of, my term of service, no attempt has been made to detail the physical signs; merely the duration of the disease, and some of its symptoms before admission, have been given.

The unsettled state of the hospital (in expectation of its removal) induced several of the patients to accept opportunities of leaving the institution before the success or failure of the treatment was decided.

February 26th, each of these cases began inhaling about three gallons of oxygen gas twice daily. The mouth of the tube conveying the gas was placed under the nose, so that the oxygen was diluted with atmospheric air before being breathed into the lungs. The tube was closed during expiration, open during inspiration.

As my term of service ended February 28th, I am indebted to the House Physician, Dr. L. D. Bulkley, for the subsequent history of the cases which follow:

CASE I.—Age twenty-five years, Ireland, sailor. Admitted December 11, 1868. Patient has all the usual signs of the second stage of phthisis. No family history. Had great congestion and pain in the fauces, which were relieved by spray of tinc. ferri chl. ♏xv, in water ℥j.

The general treatment of the patient from the time of admission to February 26, 1869, was that which is customarily followed with phthisis patients in this hospital, viz.: good diet, cod-liver oil, wine or porter, in case of night-sweats, sulph. quinine, and acid, or oxide of zinc, cough-mixture *pro re nata.*

February 26th, the patient was ordered 673 cubic inches of oxygen gas to inhale twice daily. At the same time the temperature in the axilla was taken morning and evening. Previous to the administration of the oxygen the temperature ranged from 97° and some tenths in the morning, to 98° or so in the evening. Oxygen was administered from the morning of February 26th till the afternoon of March 2d, when it was stopped, because the temperature of the patient rose to 100°. The temperature then ranged from 98° to 99° till March 10th, when the administration of the gas was resumed and continued till March 25th, at which time the thermometer in the axilla again indicated 100°; and, the remedy being once more laid aside, the temperature fell to 98° and some tenths.

During the treatment the pulse varied greatly, being sometimes as high as 114, at others down to 70 beats per minute.

The respirations were from 20 to 30 per minute. March 3d, after the oxygen gas had been stopped, they rose to 32 per minute. March 12th, the record shows that they rose to 34, the pulse beating 114; the temperature, being at the time only 99°, would seem to indicate that the elevation of pulse and respiration was due to some momentary cause, not to constitutional disturbance.

Record of April 10th says: "Patient is in a great deal better condition than on admission, feels and looks better. Discharged at his own request. The weight increased while oxygen was given, decreased after its cessation."

Patient's weight was, February 15th, 134 lbs.; March 5th, 138 lbs.; March 10th, 139½ lbs.; March 17th, 140½ lbs.; March 24th, 140 lbs.; March 31st, 139 lbs.

CASE II.—Age twenty-eight years, Ireland, sailor. Admitted January 5, 1869. Eleven months ago patient began to have night-sweats, which continued about two months, and ceased on his going South. He has had cough over five months. Three months ago the night-sweats returned, and have continued ever since. Has never raised blood, but for past four or five months has expectorated a good deal with his cough. Has lost flesh and strength greatly. Gives no family history of consumption.

On admission, general condition is bad. Patient is anæmic, breathing short, and pulse 144. On examination we find slight dulness and softening at apex of right lung. Air enters imperfectly below. Some dulness and increased vocal resonance at lower part of left lung.

Treatment usual, cod-liver oil and tonics. February 15th, patient much better than on admission. Temperature, 100.4°; pulse, 108; respirations, 33.

Inhalations of oxygen begun February 26th, continued till March 16th, when he was discharged at his own request.

February 15th, weight 120 lbs.; March 5th, 122 lbs.; March 10th and 16th, 122 lbs.

Case III.—Age thirty-two years, New York, sailor. Admitted October 29, 1868. For past year patient has had a cough which has been constantly growing worse. Has night-sweats, and for last six months has almost lost his voice. On admission is much emaciated, has a dry, nervous cough, with little expectoration.

Was ordered cod-liver oil in porter, and a cough-mixture. Patient gradually grew worse till February 26th, when inhalations of oxygen twice daily were commenced. March 5th, not so well since he began taking oxygen. It was stopped March 2d, as he seemed to be worse, and his temperature was 101°. Previous to commencing the inhalation his temperature was high, having at one time reached 100.4°; March 3d, morning temperature, 98.4°; evening, 100.4°; March 9th, temperature was 101°, inhalations recommenced March 10th, and temperature remained high until March 18th, when he was discharged at his own request.

Weight, February 15th, 115 lbs.; March 5th, 114½ lbs.; March 10th, 114 lbs.; March 17th, 112½ lbs.

Case IV.—Age thirty-one years, New York, sailor. Admitted October 20, 1868. One year ago, after severe exertion and exposure, patient caught cold. Had some cough, expectoration, and hoarseness. Two months subsequently cough became very severe. During the past year he has become much debilitated, and has lost thirty pounds in weight. Has had night-sweats. Father and five uncles died of phthisis. Left lung diseased.

Treated with cod-liver oil and cough-mixture.

Had occasional diarrhœa, and gradually lost ground.

February 15th, and subsequently, temperature record shows great and irregular variations, morning temperature sometimes being below 98°; evening rising above 102°. Oxygen given from February 26th to March 2d; patient seeming to grow worse, it was discontinued till March 10th, then given till March 25th. During the latter period the temperature twice rose to 103°. March 25th, notes say: "Patient not so well when breathing oxygen gas, which was discontinued to-day; he is a little better than a few days ago. Has no diarrhœa, very little night-sweats; has gained a pound in last week."

March 27th, discharged at his own request.

February 15th, weighs 125½ lbs.; March 5th, 122½ lbs.; March 10th, 122½ lbs.; March 17th, 123½ lbs.; March 24th, 123½ lbs.

Case V.—Age twenty-eight years, Ireland, sailor. Admitted November 17, 1868. Patient has been ailing for past year, at first suffered merely from debility. After two months cough began, and has continued since then, being accompanied by considerable expectoration. Last two months has had pain in chest and shortness of breath. During the year has become very weak and has lost thirty pounds of flesh. Some night-sweats; no diarrhœa or laryngeal trouble. Disease of right lung. Treatment, cod-liver oil, cough-mixture of hydrocyanic acid.

From February 15th, '69, to 26th, temperature varied from 98.4° to 101.2°. Oxygen commenced 26th, temperature rose to 102.5°, March 1st; inhalation discontinued, March 2d; March 6th, temperature 103°; March 8th, 102.6°.

March 10th, temperature about 101°. Oxygen recommenced and continued till March 16th, when he was discharged at his own request. During last six days patient increased three pounds in weight.

February 15th, weighs 127 lbs.; March 5th, 124½ lbs.; March 10th, 123 lbs.; March 16th, 126 lbs.

(Patient died two months after leaving the hospital.)

Case VI.—Age thirty-five years, Sweden, sailor. Admitted February 10, 1869. Six months ago began to have cough with free expectoration; has lost flesh, strength, and appetite; never had night-sweats, but spit blood twice some months ago. No diarrhœa, some hoarseness.

Treatment, tonics, good diet, etc.

February 15th to 26th, temperature pretty regularly from from 98° to 98.5°. February 26th, oxygen commenced, temperature rose to 102.2° by March 1st; oxygen stopped from March 2d to 10th, when temperature had been 98°–99° for four days; then gas was recommenced, and temperature remained about 99° till March 31st, although the gas was stopped March 24th.

Discharged at his own request, April 20, 1869.

February 15th, weighs 144 lbs.; March 5th, 148 lbs.; March 10th, 150 lbs.; March 17th, 153 lbs.; March 24th, 153 lbs.; March 31st, 154 lbs.

Case VII.—Age thirty-two years, Ireland, sailor. Admitted January 20, 1869. Caught cold eleven months since, had cough without much expectoration. Spit blood on two occasions about four months ago. Has had pains in chest, and shortness of breath; appetite poor; neither night-sweats nor diarrhœa.

February 15th to 26th, bodily temperature irregular, at one time as low as 97°, again as high as 102°.

February 26th.—Inhalations of oxygen commenced; temperature at the time 98.2°; the 27th it rose to 100.4°, and on March 2d fell to 98.4°, when the gas was discontinued till March 10th, the temperature meantime varying from 98.4° to 100.4°. Oxygen was again administered from March 10th to 24th the temperature tolerably regular, rises and falls from 98+° to 99+°.

After March 24th the ordinary treatment was resumed. Patient had some diarrhœa, night-sweats, etc.; was discharged May 20th, state being much the same as when he entered the hospital.

February 15th, weighed 124 lbs.; March 5th, 123 lbs.; March 10th, 123¼ lbs.; March 17th, 122½ lbs.

Case VIII.—Age twenty-four years, Rhode Island, sailor.

Admitted December 2, 1868. Cough began three months since, has raised no blood; expectoration slight. Has disease at right apex.

January 15th.—There is a softening at the base of the left lung. Has been taking cod-liver oil, etc.

February 15th.—Cough seems to be rather worse; from this date his temperature was taken; to 19th it varied from 98.6° to 102.3°. From 19th to 26th was between 98° and 99°.

February 26th.—Administration of oxygen was begun and continued regularly till March 26th; during this time the temperature rarely rose above 99°, and when it did so it was only by a fraction of a degree.

April 2d.—Patient has continued to gain in flesh and strength, and is to-day discharged at his request.

February 15th, weighs 121½ lbs.; March 5th, 128½ lbs.; March 10th, 131 lbs.; March 17th, 134 lbs.

Case IX.—Age twenty-six years, Nova Scotia, sailor. Admitted January 26, 1869. Patient has had pain in chest, cough, and abundant expectoration, for past two months; has lost flesh and strength; has had night-sweats. Father died of consumption. Treated with cod-liver oil and tonics.

February 26th.—Patient has not done very well since admission; coughs a great deal, and has night-sweats. To-day began inhalation of oxygen gas.

Since February 15th temperature has been from 98° and some tenths to 99° and some tenths. February 28th and March 1st it went up to 100°, then subsided to 98°–99°.

Oxygen was continued regularly till March 26th, and patient improved considerably. March 25th.—"Has no night-sweats. Diarrhœa has completely ceased; has gained 10½ pounds since oxygen was commenced."

March 27th, transferred to surgical ward for treatment of fistula in ano. He was relieved of this, but his general health retrograded; nevertheless, he left the hospital.

February 15th, weighs 150 lbs.; March 5th, 156½ lbs.; March 10th, 159 lbs.; March 17th, 159½ lbs.; March 25th, 160½ lbs.

Case X.—Age twenty-two years, Germany, cabinet-maker. Admitted February 17, 1869. Has had cough eighteen months; raised blood; has night-sweats and diarrhœa; is emaciated and weak.

Treated with cod-liver oil, etc., till February 26th, when inhalation of oxygen was commenced and continued till March 25th. During this period the temperature ranged from 98° to 100°.

March 17th.—"Patient feels much improved. Coughs less. Eats and sleeps much better. Has gained three pounds in a week."

March 24th.—"Patient has changed greatly in past three weeks." He gained eight pounds in weight; wishes to go on a voyage, so discharged March 30th.

February 17th, weighs 138½ lbs.; March 5th, 143 lbs.; March 10th, 143½ lbs.; March 17th, 146½ lbs.

As above remarked, attention is especially called to the difference of weight in these cases. Thus, to sum up—in Cases I., II., VI., VIII., IX., X., we see a gain, in the aggregate, of 49½ lbs.; in Cases III., IV., V., VII., a total loss of 7 lbs. Even in one of these, V., there was a gain of 3 lbs. during the last three days the gas was administered.

Proceedings of Societies.

RENSSELAER COUNTY MEDICAL SOCIETY, NEW YORK.

At a quarterly meeting of the Rensselaer County Medical Society, held at the Court-House, in the city of Troy, at noon, on Tuesday, the 13th day of July, 1869, there were present—

Drs. D. D. Bucklin, President; J. M. Shaffer, C. H. Burbick, Elihu Butts, T. B. Heimstreet, M. H. Burton, Jos. D. Lomax, Le Roy McLean, Henry B. Whiton, N. Hermon Camp, George H. Hubbard, William S. Cooper, J. C. Hutchinson, W. L. Cooper, C. L. Hubbell, F. B. Parmele, M. J. Davis, William N. Bonesteel, D. W. Hiscox, H. Gnadendorff, C. L. P. Giroux, and Benjamin S. Catlin.

The President having declared the Society formed, the minutes of the quarterly meeting held on the 13th day of April, 1869, were read, accepted, and adopted.

No proposals for membership were offered.

Report of Censors—by Dr. Cooper, of Troy, in the temporary absence of the chairman, Dr. Parmele, of Greenbush. The credentials of Dr. C. L. P. Giroux, of Troy, proposed at a previous meeting, proving satisfactory, his election to membership was recommended.

Report accepted and, on ballot, Dr. Giroux was elected unanimously.

Committee on Ethics.—Reported that no business was before them.

Committee on Resolutions, in view of the death of the late Dr. John Clapp:

By Dr. Burton—

The committee to whom was referred the subject of drafting resolutions expressive of the sense of this Society, in respect to the recent death of Dr. John Clapp, a member of this Society, do most respectfully present the following preamble and resolutions:

Whereas, It hath pleased the Almighty to call from our midst our deceased brother, John Clapp, after a long and laborious practice, and at a time of life when it properly became him to retire from the profession, and enjoy the fruits of his many years of toil and arduous labor; and

Whereas, It is eminently just and proper that this Society should speak in fitting terms of one in whom, like our deceased brother, we recognized all the virtues of a true Christian, thus adorning his professional life, and one whom we esteemed for his many courtesies and fraternal feelings: therefore, be it

Resolved, That we sincerely regret the loss this Society has sustained, by the decease of a brother member, and that we feel that what has been "our loss has been his gain," and that he is now receiving the reward allotted to those who lead a strictly upright and honorable career.

Resolved, That we tender to the relatives of the deceased our heartfelt condolence and sympathy in this their affliction.

Resolved, That the foregoing preamble and resolutions be inscribed in the minutes of this Society.

Report accepted, adopted, and ordered on file.

Report of Treasurer.—In compliance with the provisions of a resolution adopted at the last quarterly meeting, the Treasurer, Dr. McLean, presented a list of those members in arrears with the treasury, for the last *five years*, with a view to dropping their names from the list of membership, viz.: Hiram Moses, Simon Newcomb, P. S. Westervelt, Zechariah

Lyon, David Elliott, Emerson Hull, John E. May, Henry R. Lane, John K. Haynes, Frederick B. Leonard, Alexander H. Hull, James Thorn.

Resolution by Dr. Hubbard, seconded by Dr. Burton :

Resolved, That the Secretary be instructed to drop from the list of members the names of all persons who have not attended the meetings of the Society, and are in arrears, for the last *five years.* Adopted.

Dissertation—by Dr. Lomax of the Marshall Infirmary. Dr. Lomax read a paper detailing an account of a case of *tumor in the brain*, occurring in a person who had been struck on the head by a fragment of a shell during the late rebellion. The following symptoms were developed about four years after the accident, viz.: intense headache, emaciation, impaired eyesight, obstinate constipation, spasms of the muscles of the limbs, finally impaired intellect; strabismus of the left eye, severe convulsive action of muscles of extremities, voracious appetite, and vomiting. The patient died in a convulsion. *Post-mortem* examination revealed the presence of a tumor in the posterior lobe of the right hemisphere of the brain. It was a firm, cheesy-looking mass, adhering to the meninges of the brain, to the extent of six or seven square inches, and dipping down into the cerebral tissues to the depth of over an inch and somewhat conoidal in shape.

On motion of Dr. Butts, the paper read by Dr. Lomax was received with the thanks of the Society.

Discussion on the paper. Participated in by Drs. Lomax, Shaffer, Hubbard, and Whiton.

Paper from Dr. W. B. Rodman, of Frankfort, Ky.

The Secretary presented, and, on request, read a paper furnished him by the favor of its author, Dr. Rodman, of Frankfort, wherein was detailed the clinical history of a case of hydrophobia, that occurred in his practice during the month of March.

The reading of the paper was followed by accounts of cases given by Drs. Parmele and Butts.

The paper possessing peculiar interest through the facts presented and the happy method of the writer, and the verbal reports of Drs. Parmele and Butts being so vividly given of a disease fortunately rare in its development, the Secretary, on motion, was requested to forward a communication, embracing the three, for publication in the NEW YORK JOURNAL OF MEDICINE.

Dr. Hubbard called attention to the successful treatment of the disease adopted by the late Dr. Child, of Pittsfield, when suffering from it personally.

Dr. Davis, by request, presented a valuable collection of photographs, taken from various pathological specimens.

The President, Dr. Bucklin, informed the Society as to the legal steps taken by Dr. A. D. Head, for the purpose of securing admission to membership through a *mandamus* from the Supreme Court, having been denied the same on ballot, and further, as to the result, a denial of the motion.

On motion, the Society read the various papers and affidavits connected with the matter.

On motion, the President and Treasurer were authorized to make immediate settlement of expenses incurred.

On motion of Dr. Hubbard,

> *Resolved*, That the delegates of this Society, and those of its members who are permanent members of the Medical Society of the State of New York, be, and are hereby, instructed to take all proper measures to protect its interest in the case of an appeal by Dr. A. D. Head to the Medical Society of the State of New York.

On motion, the President appointed a committee of three, who were instructed to initiate such proceedings as they might deem advisable in view of a banquet at the next annual meeting. The following were named as the committee, viz.: Drs. Burton, Whiton, and Catlin.

On motion of Dr. Hubbard, seconded by Dr. Hubbell, the Secretary was instructed to call, during the remainder of the current year, a meeting of the Society, at noon, on the second Tuesday of each month.

Dissertator.—The President designated, as Dissertator at the quarterly meeting to be held in October, Dr. James M. Shaffer, of South Schodack.

Address by the Vice-President, Dr. M. H. Burton, of Troy.

Dr. Matthew H. Burton, Vice-President, read an exceedingly interesting account of his trip to New Orleans as the delegate from the Society to the meeting of the American Medical Association, which met in that city May 4th, together with a report of the proceedings of the Association. The doctor referred in the following beautiful manner to his colleague, now deceased, the late Dr. Alden March, of Albany: "The ex-Presidents of the Association were honored with seats upon the platform, and among the number of those thus distinguished was our late eminent brother, Dr. Alden March, of Albany, whose death we have so recently been called upon to mourn. He was there in full health and vigor, with the promise of many years of honored usefulness before him. His noble form seemed to tower above all the others surrounding him, and it was with a feeling of the loftiest professional pride that I regarded him as in some sense the representative of the medical fraternity of the North; of course his reputation had preceded him to the South, and it was gratifying to me to behold the warmth of the greeting that was extended to him by the delegates in the National Convention—gratifying, because I could look back to him as one of my preceptors, and the preceptor and examplar of so many physicians and surgeons in the land. The great and good man—the eminent physician—the unrivalled surgeon—is no more. A great brother has fallen, and we are called upon to testify our exalted respect for his private virtues, and highest appreciation of his professional and public character. Be it ours to emulate his example and seek to walk, with all humility, in his illustrious and honored footsteps."

Dr. Hubbard, seconded by Dr. Camp, moved the thanks of the Society to its Vice-President for his most interesting address. Adopted.

On motion, the Society adjourned.

Benjamin S. Catlin, Sec'y.

The Chemical Society of London, wishing to do honor to the memory of their distinguished fellow, the late Prof. Faraday, has instituted a gold medal, to be awarded from time to time to any foreign chemist who may have distinguished himself in promoting the progress of his science.

Bibliographical and Literary Notes.

Art. I.—*The Physicians of the Time of Molière; their Manners, Institutions, Doctrines, etc.*[1] By T. Edwards Clark, M. D.

We find nowhere so interesting an account of the condition of the practice of medicine in France, during the seventeenth century, as is given by M. Reynaud in his work on the Physicians of the Time of Molière. In this we have not only a considerable number of biographies, more or less complete, of distinguished doctors living at that time, but also, interwoven with these, a history of the progress of medicine, beginning even several centuries further back.

It was during this epoch that Harvey made his experiments, and announced the discovery of the circulation of the blood, and the terrible war between antimony and phlebotomy was waged and decided.

All is so vividly presented, and with such an evidence of thorough and careful research, that we are tempted to give, in several articles, a somewhat full report of the contents of this little volume; and, in doing so, we shall simply endeavor to transfer the author's ideas, making generally what may be called a free translation.

Reynaud remarks that the innumerable editors, annotators, and commentators, who have written about Molière, are agreed on one point, though they differ on many others, and that is, that he has derided medicine, and held up doctors to everlasting ridicule. They have taken his pleasantries for sober earnest, and considered them historical facts. While some have held that the personages of his plays were often representations of persons then living, all have believed that he intended to decry the whole medical profession. Accordingly they are disposed, with Molière for authority, to pronounce the physicians of the sixteenth and seventeenth centuries charlatans, libertines, infanticides, poisoners, extortioners, and pedants.

---

[1] Les Médecins au Temps de Molière, leurs Mœurs, Institutions, Doctrines, par M. Maurice Reynaud. Nouvelle édition, Paris.

With a desire to form an opinion, and to look into a period of medicine in France little known, our author determines to investigate the reliable sources of information for himself, and asks, if it should so turn out that these were, under the burlesque masks by which we know the doctors of that age, men of mind, distinguished *savants*, worthy philosophers, even good doctors, do we think that the glory of Molière will suffer much? He is so great, that it is not necessary to detract from the merits of others while praising him; and is it not the better way to admire him, to give to his words only the sense which he gave to them, without extenuating any thing, but also without transforming the personages of comedy into heroes of the melodrama?

Reynaud does not write for the defence of Molière, though he considers that what he attacked merited it. The absurdities which he held up to ridicule are mostly dead, thanks to him, yet some remain and always will. In this work he treats of a number of facts and usages not alluded to by the distinguished French satirist, for the purpose of presenting a true picture of the society and manners of his distant period. He confines himself principally to the time of the active life of Molière, that is to say, to the period between 1640 and 1673, though he goes back into the sixteenth century, and even, as we have said, several centuries earlier, in tracing certain usages and traditions of the faculty of medicine.

He devotes a chapter to the medical doctrines of the seventeenth century, which descended in a direct line from Galen, as he considers a knowledge of these indispensable to the correct appreciation of the scientific and literary controversies met with at almost every step in the history of that epoch.

The first chapter, which contains an account of the origin, constitution, and so on, of the ancient Faculty of Medicine of Paris, opens in the following interesting manner: "At the corner of the rue de la Bucherie and of the rue de l'Hôtel Colbert (formerly rue des Rats) there stands an old and dingy house, surmounted by a sort of round tower, which one might readily take for an ancient abandoned pigeon-house; an infectious and unhealthy haunt, which threatens ruin on all sides, and which will before long disappear, thanks to the increasing renovations of the capital, which have not yet, however, transformed this gloomy quarter. On one of the fronts there is an escutcheon with this half-effaced inscription: *Urbi et orbi salus.* On mounting by a damp stairway to the first story, we find there a large circular hall, divided into four parts, of irregular forms. Above some empty niches sunk into the thickness of the wall, there runs a large cornice, the dilapidated sculpturing of which represents alternately a cock, the bird of the god Esculapius, and emblem of vigilance, and a pelican nourishing her young, emblem of devotion. To watch and to sacrifice one's self for others, the two great duties, the two great virtues of the physician! That ruin is nothing else than the ancient amphitheatre of the Faculty of Medicine. It is there that, day after day, the great anatomists of the seventeenth century, Bartholin, Riolan, Pecquet, Littre, and Winslow, studied and taught."

This house formerly belonged to a large and beautiful mansion, built in 1492, of which nothing more remains. Gabriel Naudé, in a discourse on the antiquity and dignity of the Parisian school of medicine, describes the condition of it at that time, the seventeenth century. There was a large court, a vast hall for public debates, others for the daily lessons, a beautiful chapel, rich furniture, a library full of the most precious books, a laboratory for the preparation of medicine, lodgings for all the employés, and a botanical garden containing all the plants used in medicine. Certainly, he said, none of the foreign faculties of Rome, Bologna, Padua, or Salamanca, can show as much.

The University of Paris, which in the twelfth century had already been in existence for an indeterminate time, was first divided into *nations* on account of the large number of students attending it from various parts of Europe. The four nations of France, Picardy, Normandy, and England, gave place, about the end of the twelfth century, to a division according to faculties. The faculties of art and theology were the first established; and later those of law and medicine were created. Whatever may be the precise date of the origin of the latter, it certainly could boast in the seventeenth century of having quarters as noble and ancient as the grandest families and institutions of that time. It is generally believed that the doctors were formed into an independent body in the university between the years 1267 and 1281. The name Faculty of Medicine is comparatively modern; for a long time they were called Facultas in Physica, and from this our own word physician is derived.

The author then expatiates on the spirit which ruled the fraternity from the time of its organization, to the epoch which we are about considering. The faculty increased, but did not vary; it remained faithful to its spirit and its traditions—always showing that same proud independence, that profound sentiment of association for the common defence, that need of unity which presided at its formation, and which has sustained it against attacks of all kinds. It had its many privileges granted by the king, but it in return gave a strict observance of ancient usages, and a blind devotion to law. Medicine was a lucrative and honorable profession, accessible only to the upper classes.

The faculty had, unfortunately, however, its faults. It was altogether too strict in the matter of exclusion and routine, and not free from chicane and obstinacy. It was not absolutely an enemy to progress, but wished that every advance should begin with it, and not with others. As no one has the monopoly of genius and of discoveries, it now found itself the born enemy of many things grand and useful. It sacrificed surgery to mean passion; it proscribed the circulation of the blood, because it came from England; antimony, because it came from Montpellier; quinine, because it came from America—foolish and useless acts, which have rightly rendered it an object of public ridicule.

But the faculty must not be judged entirely by these faults. Its sins have punished it sufficiently. Its name remains a symbol for routine and pedantic ignorance; and even yet the public has such a grudge against it, that it would hold it responsible for all the failings of medicine itself, and never neglects to tax it with obstinacy whenever a new system, a new drug, a pretended miracle, does not receive from men of science the ephemeral ovation which the thoughtless enthusiasm of the multitude awards to it.

The relatively small and restricted number of the members of the faculty was one of the elements of its importance. This number, between the years 1640 and 1670, did not vary much from one hundred or one hundred and ten; and on an average less than four were admitted to the doctorate yearly. We can easily see why so much importance was attached to this grade, and why so much of solemnity surrounded a reception into this fraternity. Most of the members were located in Paris, and were Parisians. Medicine was perpetuated in certain families, very commonly. During the period of which we speak there were one hundred and ten doctors to a population of 540,000 souls; that is, about one to every 4,900 inhabitants. Now there are in Paris about 1,800 to 1,740,000 souls, or one doctor to 960 inhabitants. It is not strange that the practice of medicine was so profitable in those days; nor is the contrary at the present time difficult to be accounted for.

The faculty was divided into two categories, seniors (*anciens*) and juniors (*jeunes*); and the latter, ten years after their reception, passed to the rank of seniors. The statutes are very explicit in regard to the honor, the respect, and the homage, due to the seniors by the juniors. They must rise on their entrance, in all ceremonies yield them the precedence, and under all circumstances show them the greatest deference. In other respects both had the same duties to perform, and enjoyed the same prerogatives.

These men of different ages and situations were also held together by the tie of religion. The first condition, for a long time, for admission to examination, was the being a Roman Catholic; and the faculty even dared to refuse admission to persons, though they were recommended by the king, simply because they were Protestants. But as early as 1648 this exclusive rule began to be departed from, and Catholics and Protestants associated on perfectly friendly terms till the revocation of the Edict of Nantes.

At that time the faculty took the place of the public institutions of utility of the present day. All important measures relating to medical police passed through its hands: it had the supervision and inspection of imported drugs; it was consulted in regard to the great epidemics which visited Paris or any part of the kingdom, and in regard to general measures of public hygiene—the supply of water to the city—the location of cemeteries—the quarantine—the adulteration of food, and the means of preventing it. In fact, the importance which the faculty held was in a great measure forced upon it by the state.

The dean was the highest dignitary, and chief defender of the faculty; the guardian of its discipline and its statutes. He carried, suspended from his neck, the keys of the seal of the academy and of the faculty. He alone had the right to call the members together and to preside at their meetings. He was in duty bound to defend the faculty from all attacks made against its privileges or its dignity; and, as those assaults were numerous, this high official generally found his position no easy one, considering that he had also a large private practice to attend to. The dean was elected every two years, and, what is remarkable, the professors also, those who had distinguished themselves being eligible to reëlection.

There are two kinds of instruction, of which the second or lesser was given by the bachelors, who had only the right to interpret the ancient authors according to an established programme. The professors reserved to themselves the superior right of dogmatic and original instruction, according to whatever method they pleased, with the approbation of the dean. This distinction was kept up in external forms, for the professors alone spoke from the grand chair of the amphitheatre, *ex superiori cathedrâ;* while the bachelors held forth from the less elevated benches.

At first, and for a long number of years, there were but two professors. One, to whose department belonged anatomy, physiology, hygiene, and dietetics, lectured at six o'clock in the morning; the other lectured at mid-day on pathology, materia medica, and therapeutics. The course comprised two years of instruction. During the seventeenth century this programme was found to be insufficient. There existed already a course of lectures on surgery for barbers' apprentices, but in 1644 another was established "*en latin*," to which only medical students were admitted. In 1646 a chair of botany was created, and later two professorships of pharmacy, the professors holding the latter having also the duty of inspecting the apothecary-shops on both sides of the Seine.

At the installation of the professors they took an oath, of which the following is a portion: "We swear and solemnly promise to deliver our lectures in long robes with large sleeves, having the square cap on the head, and the scarlet hood on the shoulder."

In addition to these there were lectures delivered at the Royal Garden and at the College of France. As to practical instruction there was a great deficiency, especially in surgery. At that time only the bodies of criminals could be taken for dissection; and the faculty was generally obliged to wait till some one had committed a crime punishable by death, in order to profit by it. Whenever the dean was informed that an execution had taken place, he ordered the grand beadle to call together the doctors and the students. In those days there was a great respect for the dignity of science, and all manual occupation was considered degrading; consequently the professor, who was a *savant* and dwelt in the heights of theories, could not descend to the use of the scalpel. He who dissected was considered a machine. To fill this infamous position no one could serve better than a surgeon-barber (*barbier-chirurgien*). Unfortunately, it sometimes happened that the modest dissector knew more than his master; and, what is curious, the faculty never even deigned to pay this poor workman.

There was placed at the order of the professor an archdeacon of the school, whose duties were not ecclesiastical, but among other things consisted in repeating in Latin the lecture of the day after the professor had finished his demonstration. He was a sort of prosector, and chosen by the students from among themselves or the bachelors.

In this remarkable organization there was, it is surprising to say, no complete clinical instruction. The professors were so much absorbed in that which related to the erudition, the philosophy, the interminable arguments and traditions of the school, that they forgot that medicine belonged to the bed of the sick. The consequence was, that many a student received his bachelor's degree without ever having seen a sick person professionally. In fact, he was then only considered capable of profiting by it, and accordingly he attached himself to some doctor and followed him in his visits. In 1644 an amelioration was begun by the establishment of a regular service of public consultations for the poor, and six doctors were appointed for this purpose. Nevertheless, the practical side of science, which has the first place with us, was comparatively neglected.

The examination for the degree of Bachelor of Medicine took place every two years, and the candidate must have attended the course of the school for that length of time, and have reached at least twenty-five years of age. This examination, which lasted a week, was on all the studies of the two years, and questions were asked by any of the physicians present, the exercises closing by giving to the candidate an aphorism of Hippocrates for discussion and elucidation. The examiners then made their report to the assembly of doctors, and a vote for admission or rejection was taken. Before receiving the degree the bachelor took a solemn oath to observe the duties, customs, and so forth, of the medical fraternity.

But this degree did not give him the license to practise; to obtain this he had now, week after week, to read and defend before a numerous assembly, and in the midst of imposing ceremonies, various theses on physiology and medicine as well as hygiene. We mention here some of the questions which were seriously discussed. "Are heroes born of heroes?" "Are they bilious?" "Is it good to get drunk once a month?" "Is woman an imperfect work of nature?" "Is sneezing a natural act?" "Have bastards more mind than legitimate children?" "Is it necessary to take count of the phases of the moon in cutting the hair?"

The discussion on the theses relating to physiology or medicine began at 6 A. M., and was kept up till mid-day. The attack commenced on the part of the bachelors present, which lasted for two hours, the candidate being obliged to answer their questions and arguments as best he could. After this, nine doctors, appointed for the purpose, three seniors and six juniors, successively pressed the discussion with new vigor. This lasted three hours, when the session terminated by a general assault for an hour.

The defence of the theses relating to hygiene was even worse. This was sustained from 5 A. M. till mid-day, and each bachelor was required to propose two arguments to the candidate. What a terrible ordeal that must have been for him, obliged by the statutes for seven long hours to have more mind, literature, and erudition, than all the faculty together; to answer without embarrassment the most subtle arguments which a controversial spirit could invent; to be on his guard not to risk either a phrase or a word which any one could turn against him. And, as if to make the contest still more unequal, the candidate, according to usage, was obliged himself to furnish to his rivals and his judges the means of renewing the attack or repairing their forces.

In an adjoining room wine and refreshments were served at his expense; and each doctor could, whenever he chose, retire to replenish in this way his ideas and inspirations; and it is not improbable that sometimes the ardor of debate was not the only thing that heated the brain. The unfortunate candidate, however, remained, without a moment's interruption, defending himself from all attacks till the twelve strokes of the great clock put an end to the long contest.

These exercises extended over two years, the bachelors interrogating or being interrogated, besides visiting the sick and imparting instruction to their younger comrades, till at last the time came for receiving a license, for passing from the condition of a student into the bosom of the faculty. Now again they presented themselves before that august body, and demanded admission to "the special examination," "*l'examen particulier*." If it had been discovered that any of the applicants had practised the art of surgery "or any other manual art," he was obliged, before being admitted to a license, not only to take an oath, but to engage, by an act passed before a notary, to renounce forever the exercise of that art."

This accomplished, the candidates presented themselves one by one at the houses of the different doctors. There alone, in the silence of the cabinet, away from the pomp of the schools and the fascinations of a public examination, the attainments of each in practice were carefully investigated. These examinations lasted a long time, but, when they were terminated, the faculty, assembled by the dean, pronounced upon the admission or rejection of the bachelors. Those who were the fortunate ones were declared, not "licenciés," but "licentiandes," that is, deserving of being licensed.

They then formed in procession and presented themselves at the residence of the chancellor of the academy, who appointed a day for them to receive their license. Next they, accompanied by the bachelors newly created, proceeded to request of the various high functionaries of state that, at the appointed day, they would be present to learn from the paranymph (the dean) the names and titles of the doctors that the faculty was ready to present to the city and the whole world. The place for the new ceremony was the grand hall of the archbishop. At 5 A. M. the doctors assembled here to decide in what order the candidates should receive the license. To obtain the first place was the aim of all the bachelors, and to obtain it promised a brilliant future. The decisions were made according to the merits of the candidates. At ten o'clock the hall was open to the high officials, and the nobility called together for the occasion. The list of names was read, and the candidates, falling on their knees, the head being uncovered, received the apostolic benediction from the chancellor and the right to practise medicine there and throughout the whole world. Then the assembly marched to the cathedral to thank the Holy Virgin for the successful termination of what had been begun under her auspices. So ended the ceremony of license.

The *doctorate* was still to be obtained. The license introduced the young man to the public with the right to practise medicine, but the doctorate, which was to introduce him into the sanctuary of the faculty, was to be conferred by particular ceremonies—still further assistance from the civil and religious authorities was required. After six weeks the licentiate had the right to be admitted, but in practice, out of respect and a feeling of humility, this time was lengthened. The order of the license regulated the order of admissions. When one made application, the dean inquired carefully into his life and manners, and, if all was favorable, he was admitted to what was called the *vespérie;* that is, an after-dinner meeting preparatory to admission, over which a senior doctor presided, who opened the session by a solemn discourse on the dignity of the medical profession, the duties which he would have to perform, and the maxims of honor and probity to which he must conform his life. The president also proposed a question for discussion to the candidate, and two or three other discourses terminated the session.

Some days afterward the future doctor, escorted by bachelors and beadles of the school, visited each of the doctors and invited them to be present at his reception. The day came; the licentiate, preceded by mace-bearers and bachelors, having his president on his left and followed by the doctors who were to dispute with him, entered the great hall of the school and took his seat by the side of the president. The grand beadle then approached and required him to take three oaths, namely, to observe the laws, and so on, of the faculty, to assist at the mass for deceased doctors, and to oppose strenuously all who practise medicine illegally, and to spare none. The president then, after a short exhortation, took a square cap with which he traced in the air the form of the cross, and placing it on the head of the licentiate gave him a slight blow with two fingers of the right hand. He then embraced him, and from that moment the world possessed another doctor. As if for the purpose of showing his freedom, he immediately proposed, what was never allowed him before, a question to one of the doctors present for discussion. This argument completed, the new doctor closed the proceedings by a *discours élégant*, thanking God, the faculty, his parents, and friends, for the happy occasion. The following day his name was registered, and he entered for ten years the order of juniors.

One cannot help but perceive the striking analogy, not to say perfect similarity, between these scholastic solemnities and the famous "Cérémonie" of Molière's "Malade Imaginaire." As is well known, this was composed at the house of Madame de la Sablère, after a joyous supper where Boileau, La Fontaine, and the celebrated Ninon de l'Enclos, were present. Molière furnishing the groundwork, each one put in his word; and it is more than probable that there were two or three doctors, friends of Molière, present, such as Lienard, Bernier, and Mauvillain, for certain technical expressions, certain intimate details, show a perfect acquaintance with the interior of the faculty on the part of some collaborators. That the "Cérémonie" is at least not overdrawn or exaggerated in all its parts may be easily inferred when such texts as the following, in praise of the faculty, were taken and expatiated upon most seriously: "The doctor resembles God. Messieurs of the faculty, you are the benefactors of the human race, you are like God by knowledge, by power, by pity; you are the ministers and the colleagues of God!" Soon the orator allows himself to be carried away by his eloquence, and he passes to higher flights. "You and both evil and good came from God. From you, doctors, nothing comes but good. Without doubt God is just, and He has His reasons for afflicting us; nevertheless evil is always evil, and medicine is always salutary. What a wonderful and truly incredible thing it is that experience teaches us every day! God brings us sickness, and you the remedy. He smites, and you heal. He inflicts suffering upon us as a chastisement, but you bring only relief and benefits." Conclusion, "We would owe more to the doctor than to God even, if it were not that it is to God we owe the doctor!"

We should not neglect to notice the culinary and gastronomic side of our portraiture of the doctors. At the time of Molière, sumptuous repasts began to be less frequent; but in the heroic age of Rabelais these abounded. They dined after each examination, after each thesis, and at the expense of the candidate. They dined on St. Luke's day, at the rendering of accounts, and at the election of the dean. Every thing was taken as a pretext for a good dinner. When the chair of botany was erected, they did not fail to establish a botanical banquet; and there was a time, according to Hazon, when the faculty nominated two officers to taste the wines before they assembled. This occupation of good living had its effect on the nature of the questions proposed or the thesis sustained. In reference to hygiene at various times, such questions as the following were put: "Should the lettuce be served in the first course, and the apples in the second? Is it good to eat nuts after fish, and cheese after meat? Ought we to consider tea and chocolate as drinks?"

At that time doctors were ranked among the nobility, and all had their coat-of-arms. The arms and devices of the dean were stamped on the medals of the faculty. It is also certain that the profession at Paris had among its number many who were real and authentic nobles; hence, we of course conclude that these did not think it degrading to practise medicine. The plebeian, by the mere fact of becoming a doctor, became a nobleman; but under the ancient *régime* there were two kinds of nobility. Delarroque admits twenty. If he had written fifty years later he would have counted many more; for at that time, when the Revolution suppressed all privileges, France was in a fair way to become all noble. There existed, even as counsellor to the king, an examiner of hogs' tongues (*langueyeurs de porcs*)! In the seventeenth century three kinds of nobility were especially recognized; one of race, one of concession, conferred by the king, and one of personal nobility. To the latter doctors belonged. It was a rank which mind and science imparted, and was purely honorary, and ceased with the death of the person, being no more transmissible than merit and science themselves. Doctors in Paris, as members of the university, enjoyed all sort of immunities and privileges, and were not liable to be taxed.

In those times they made their visits riding on mules, and having grand wigs and majestic beards. Thus mounted, they had an air a little *épiscopal.* When Guénaut, a man of fashion and an innovator in all things, dared to ride on a horse, it was considered almost a scandal. Guénaut and his horse became a sort of proverb. In the famous consultation of *l'Amour Médecin* the conversation begins on this delicate subject:

"*M. Tomès:* It must be said that I have an admirable mule for that, and one can hardly believe the distance that I drive him every day.

"*M. Desfonandrès:* I have a wonderful horse, and he is an indefatigable animal."

This question of the precedence between the horse and the mule is the difficulty between the past and the present, between the old and the young school; and it must be confessed that the former is not too badly represented. Many were not content with this, but made their visits in the long robe of a magistrate, with the red hood and band (*rabat*). Pascal has somewhere said: "Who could have confidence in a doctor who does not wear the *rabat?*"

The statutes prescribed the mode in which consultation should take place. The younger expressed their opinions first; the majority decided the course of treatment, and the oldest made the report to the friends of the sick. Riolan says that, consequently, consultations always went on harmoniously, but our knowledge of human nature would lead us to doubt this somewhat.

According to *Tomès*, "a man who dies is but a dead man, and a matter of no consequence, but a formality neglected brings notable damage to the whole body of physicians. . . . At a consultation where there were three of us, with a country doctor, I stopped the business. The people of the house did what they could, and the disease was progressing rapidly; but I would not give way, and the patient died bravely during our dispute."

If the physicians of that time can be reproached for any thing it is for being, as Molière has said, doctors from head to feet. They had neither a doubt nor a scruple in regard to the rules of Hippocrates; these were as texts of Scripture. That they were sincere is to say much in their justification.

Guy Patin, born in 1601, was a type of the conservative element of the faculty, who enjoyed in his time an immense reputation as a learned man and as an orator. United with Riolan, he held the chair of medicine in the college of France, and taught for a long time with *éclat.* Appointed dean in 1642, he distinguished himself by the vigor with which he defended the privileges of the faculty. His letters seem at first to be a tissue of contradictions. Everywhere he appears to us with a double face: believing in medicine, and skeptical in regard to all else; obstinate in defence of the privileges of the faculty, and full of liberal aspirations, sometimes almost republican; believing in progress, and not ceasing to detract from the present to exalt the past. As his writings touch on almost every thing, it is not strange that there are incoherences, recorded impressions of the moment; but these give as it were often a charm to his works. Yet, if we would take the trouble to place ourselves in his times and circumstances, all these things would explain themselves. He was frank, cultivated, and literary in the better acceptation of the word; opposed to the government, not simply because he belonged to that party, but because it was in his nature to attack errors, superstitions, and prejudices; bold even to skepticism, and at times jesting even to impiousness. His language was of a freshness that would have pleased Rabelais, and astonished Montaigne; and he risked every thing for a witticism.

Guy Patin, as dean, and as member of the faculty, was strongly attached to its traditions. The experimental method in medicine is an idea much more modern than in physics, and the other sciences. In the seventeenth century, observation was based on theory and directed by it. They believed, with Hippocrates, that Nature tends to healing, and that disease is but the external manifestation of a salutary effort; of a contest begun by the vital forces of the organism against the causes which tend to its destruction. Consequently the office of the physician should be to limit itself to tempering the excessive movements, to exciting those which languish, to watch, and rarely to provoke the appearance of the crises on which depends the reëstablishment of health. There is in this a depth of truth, which, however we may understand it, will always force itself in practice, and which all systems cannot change.

If there is any thing to reproach in the physicians of the seventeenth century, it is not so much that they were influenced by these ideas, as that they often spoiled them by an abusive mixture of humoralism. The glory of modern science is to have introduced analysis, where antiquity penetrated only by a sort of intuition; to have submitted to a severe criticism the pretended laws, which had sprung from incomplete observation; to have transformed the mysterious powers of nature into material, positive, and palpable facts. In short, she has joined herself to the old Hippocratic tradition; she completes, corrects, but does not destroy it.

Goethe has somewhere said that Nature reveals to us her secrets in her monstrosities.[1] We can hardly suppose that monstrosities have any special privilege in this respect, but they certainly show the prevalence of law where the world has been wont to speak of its absence. Neither are we aware that any secret of the laws of development is revealed in monsters, that is not also revealed in ordinary and "normal" forms; nevertheless, they give illustrations, in new shapes, of the operation of law. Bodies more or less double form a large portion of all the monstrosities not attributable to accident or disease, and these Dr. Fisher has, in his essay not yet quite complete, treated with a thoroughness and comprehensiveness which make his work highly valuable, not only for its descriptive details, but for the almost exhaustive treatment of the literature of his subject. If we were to criticise any thing, it would be the nomenclature, which, to the uninitiated students, must look rather formidable. The subject of the essay would be just as well expressed by the term double-monsters as by diplo-teratology, and *cephalopagus cranio-diolymus asymmetros* is a rather long name. Dr. Fisher has, however, an abundance of authorities, not only in this, but other departments of zoological and physiological inquiries, to sustain him, and it is perhaps a matter of hypercriticism to cite these names, especially as he has given good definitions of them, as well as of all the terms used.

His classification is based on sound morphological principles, nevertheless, as in all methods of classification, some of the groups are more or less arbitrary. His principal groups comprise: 1. Those double from above, *Catadidymi;* 2. Those double from below, *Anadidymi;* 3. Those double both above and below, *Anacatadidymi.* So far the classification is perfectly natural, but, when it comes to generic and specific differences, absolute characteristics are less easily recognized. If all the double forms of the third group, for example, were arranged in series, we should find a gradual transition from those standing face to face, as the Siamese twins, in their true position, to those standing back to back, as in Judith and Helen or Millie and Christina. Nevertheless, the conditions intermediate between the extremes require specific treatment, and we do not know how they would be better classified than they have been by Dr. Fisher, and hitherto no one has classified them so well. The chief excellence of the work is, however, to be found in the completeness of the descriptive details, in which the essential anatomical features are clearly portrayed. If any one wishes to study the subject of double monsters, the best advice we can give is, to take Dr. Fisher's book as a manual, and, for illustrations in addition to his excellent plates, the rich and unsurpassed series of preparations in the cabinet of the Boston Society for Medical Improvement, made by one of the most accurate, faithful, and painstaking anatomists, Dr. J. B. S. Jackson, in which are to be found representatives of almost every type, either from man or the lower animals.

---

[1] Diplo-teratology. An Essay on Compound Human Monsters. By George J. Fisher, M. D. Albany, 1866.

We deeply regret to learn that the New York State Medical Society, in whose Transactions the publication of Dr. Fisher's Memoir was begun, have discontinued the printing of it, on the score of unsuitableness. We have no hesitation in saying that, so far from being unsuitable, it is a work which any scientific body ought to take pride in encouraging, and which cannot fail to give the author an honorable place among scientific inquirers.

Books and Pamphlets received.—On the Treatment of Uterine Catarrh. By Joseph Kammerer, M. D. Pamphlet reprint from American Journal of Obstetrics, pp. 23. (From the Author.)

Eleventh Annual Announcement and Catalogue. Chicago Medical College. Session 1869–'70.

Annual Announcement and Catalogue. Medical Department University of Buffalo. Session 1869–'70.

Twenty-eighth Annual Announcement and Catalogue. St. Louis Medical College. Session 1869–'70.

First Announcement St. Louis College Physicians and Surgeons. St. Louis, Mo.

Annual Announcement and Catalogue of the Missouri Medical College. Session 1869–'70. St. Louis, Mo.

Miscellaneous and Scientific Notes.

We notice with satisfaction that, in the award of the Monthyon Prize (Concours of Medicine and Surgery), Prof. Austin Flint, Jr., of this city, received an "honorable mention" with a "recompense" of 1,500 francs, for his paper on a "New Function of the Liver," etc. This paper appeared originally in the *American Journal of Medical Sciences*, October, 1862, and was translated into French, and entered for the Monthyon Prize at the instance of Prof. Claude Bernard. This handsome acknowledgment of the merits of the paper, as well as the success it has met in the Concours, is a matter not only for congratulation to the author, but an occasion whereon we may indulge in a little pardonable glorification at the honor conferred upon the profession of this country.

The prize itself, of 2,500 francs, was awarded to Villemin for his Researches upon the Inoculation of Tubercle—which is, undoubtedly, one of the most valuable contributions recently made to the science of medicine.

Editor of the New York Medical Journal:

Dear Sir: I notice, in your January issue, a communication from Dr. Austin Flint, Jr., entitled "Experiments undertaken for the Purpose of reconciling some of the Discordant Observations upon the Glycogenic Function of the Liver." Permit me, through you, to make a suggestion to Dr. Flint regarding a portion of the experimental evidence upon which he has relied.

It is toward reconciling Bernard's views and my own, that Dr. Flint's communication is directed. As regards the state of the liver, his results coincide with those I have obtained. He agrees that, during life, the liver is devoid of sugar, but considers nevertheless that the liver is a sugar-forming organ, and that sugar is discharged from it into the circulatory system. He expresses himself thus in the concluding paragraph of his communication: "During life, the liver contains only the glycogenic matter, and no sugar, because the great mass of blood which is passing through this organ washes out the sugar as fast as it is formed; but after death, or when the circulation is interfered with, the transformation of glycogenic matter into sugar goes on; the sugar is not removed under these conditions, and can then be detected in the substance of the liver."

Now, looking at the experimental evidence upon which this conclusion is founded, I have nothing, as it may be imagined, to say against that portion which refers to the liver. According to the details given, a portion of liver during a living state was obtained, and as quickly as possible placed in a condition for arresting any *post-mortem* production of sugar. Upon its being tested, Dr. Flint, in harmony with my own results, failed to obtain any decided evidence of saccharine impregnation.

Thus far, then, it is satisfactory to find that our results coincide. I now come to the point upon which they are at variance, and my object in penning these remarks is, to point out that it is, I consider, upon the method of experimental procedure adopted by Dr. Flint that this variance depends.

Notwithstanding Dr. Flint's experiments yielded him specimens of liver free from sugar, yet he speaks of the blood derived from the liver as having been found to be charged with sugar. In obtaining this result, I observe that the blood was not collected from the hepatic veins until after the preliminary operation for procuring a specimen of liver had been conducted. According to the details given, the following is the process that was adopted: "Immediately after cutting off a portion of the liver, and throwing it into boiling water, the medulla oblongata was broken up; a ligature was applied to the ascending vena cava just above the renal veins; the chest was opened, and a ligature applied to the vena cava just above the opening of the hepatic veins. A specimen of blood was then taken from the hepatic veins."

Now, so quickly is sugar formed in the liver after death, that, after the above method of procedure, I should look for the result that was obtained by Dr. Flint. To procure a representation of the natural state of the blood, as much promptitude is called for in its collection after death as in the case of the liver. Dr. Flint's experiment consisted of two distinct portions, that referring to the liver and that referring to the blood. If the steps of it had been reversed, and the animal devoted in the first instance to the collection of blood, I think he would have found sugar in the liver, and absent or nearly absent in the blood. There is necessarily an expenditure of time involved in placing ligatures upon the veins, as was done by Dr. Flint before collecting the blood. By means of a catheter, blood may be collected from the inferior cava, at the seat of entrance of the hepatic veins, during life; and, when so collected under a state of tranquillity on the part of the animal, it has been found by myself as well as by others to present only the same traceable indication of the presence of sugar that is met with in the other parts of the circulatory system.

Sugar, being discharged into the circulation through the hepatic veins, would be at once conveyed to and give a saccharine character to the contents of the right side of the heart, and it was formerly stated that the blood of the right side of the heart in reality presented a saccharine behavior which did not belong to that of the left, the conclusion being founded upon the evidence furnished by the *post-mortem* state. Now, there is no difficulty in experimenting so as to secure a specimen of blood being obtained from the right side of the heart after death, in what may be regarded its natural state. If, for instance, instantly after the destruction of life by pitting, the chest be opened, and the heart seized, and a ligature placed around its base, the blood that is detained in its cavities will present the condition belonging to life. In operating in this way, and comparing the blood removed from the right cavities of the organ with a specimen procured from the portal vein, and also some collected previously from the carotid artery during life, I have been unable to discover any appreciable difference of behavior between them. Such, however, is very far from being the case; if only a short time is allowed to elapse after death, before the blood is imprisoned in the heart for collection, on account of the rapidity with which the the *post-mortem* production of sugar in the liver takes place, it requires but a very short time for the contents of the circulatory system between the liver and lungs to acquire a marked saccharine chaacter. It must be remembered that, in the destruction of life by pitting, the cause of death is stoppage of the respiration. The circulation continues for a little while after the destruction of the medulla oblongata has been effected, and thus the sugar found is carried onward from the liver.

I would ask Dr. Flint to alter his mode of experimenting, so as to make it conform to what I conceive to be required to avoid exposure to fallacy, and I think his results will then tally with my own in the case of the blood, as they have done in that of the liver.

F. W. PAVY.

HISTORICAL CONSIDERATIONS CONCERNING THE PROPERTIES OF THE ROOTS OF THE SPINAL NERVES.—Although we have in a previous number of the JOURNAL briefly alluded to this subject, we deem it of sufficient interest to warrant this more extended notice, for which we are indebted to Professor John C. Dalton, M. D., of this city.

In the *Quarterly Journal of Psychological Medicine and Medical Jurisprudence*, for October, 1868, Professor Austin Flint, Jr., gives an extended and critical account of the discovery of the separate localization of sensation and motion in the anterior and posterior roots of the spinal nerves. It is always interesting to know the exact way in which we have arrived at the knowledge of any important fact in medical science. And in this particular instance it seems that a singular error has prevailed in regard to the real authorship of one of the most important points relating to the nervous system. Sir Charles Bell has been generally—almost universally—credited with this discovery, even in France, while it is really due to Magendie, as Professor Flint's analysis of the claims of the two rival physiologists abundantly shows. There are only two publications of Sir Charles Bell which have been regarded, within the last fifty years, as bearing directly on this point. One of them, the "Idea of New Anatomy of the Brain," printed in 1811, does not really contain any thing which corresponds to our present knowledge of the distinctly motor and sensitive character of the two roots of the spinal nerves. It has been supposed to contain the germ, at least, of this discovery, only because it is so easy to misunderstand the expressions of an author who looks at his subject from an entirely different standpoint from our own.

It is almost as difficult to appreciate fully the ideas of medical men belonging to a state of medical knowledge dating half a century ago, as to anticipate those which will be in vogue half a century to come. We can only do so by keeping in mind all the imperfections of medical science at that time, and by understanding the expressions there used exactly as if no subsequent discoveries had been made. We thus place ourselves in the position of the authors, and are then able to appreciate what their words really mean.

Sir Charles Bell's pamphlet of 1811, far from indicating the distinction of the two spinal roots into sensitive and motor, really advances the idea that the anterior roots are devoted at the same time to sensation and voluntary motion, while the posterior roots are devoted to the "vital" functions, i. e., to the actions of the digestive, circulatory, and secreting organs, and the like—in other words, to the functions of "organic" life, as we should express it at the present day.

The other paper of Sir Charles Bell, relating to this subject, was a memoir "On the Nerves," etc., presented to the Royal Society in 1821. In this paper he endeavored to show that certain nerves, such as the fifth pair of cranial nerves, were devoted to *sensibility and voluntary motion*, while others, distributed to the same parts, such as the seventh pair, or facial nerves, were intended to provide for the necessary *involuntary* or *respiratory* motions. A careful perusal of the original paper, in the Philosophical Transactions of the Royal Society, leaves no doubt that this was the entire object and scope of the memoir. So far, then, no one had indicated, in the most cursory way, the real characters of the anterior and posterior spinal roots.

Now, in 1822, Magendie performed and published his experiments, bearing directly upon the anterior and posterior roots of the spinal nerves, and established the distinctively motor character of the former, and the sensitive character of the latter. When the truth of this fact was fully recognized, as it very soon was, a previous discovery was claimed for Sir Charles Bell, on the strength of his former publications; and, singularly enough, he succeeded in gaining and keeping, not only for the rest of his life, but for many years afterward, a very general credit for a piece of scientific property to which he had not the least genuine title.

From the account of Sir Charles Bell's works given above, it would seem almost incredible that such a mistake could have been made. But it happened in this way. That the credit of the discovery has been assigned to Sir Charles Bell is owing simply to the fact that the two papers upon which his claim was based have usually been examined, not at first hand, but at second hand, and in this way have been misunderstood.

The pamphlet of 1811 was soon out of print, as it was only printed at first for private distribution; and it has been accessible, since then, mainly in the form of quotations advanced for controversial purposes. The paper, presented to the Royal Society in 1821, has been also generally neglected, being seldom referred to, even by those interested in the subject, because it was "reprinted" in Sir Charles Bell's work on the nervous system, published several years afterward. But, when this "reprint" is compared with the original paper, it is found to have been carefully altered in all the passages which would betray the author's ignorance, as to the real character of the motor and sensitive nerves of the face, at the date of its first publication. It is really upon these altered passages that Sir Charles Bell's claims to priority over Magendie have so long rested; and, if the memoir had been reprinted as it was actually written in 1821, no doubt would have existed that the discovery of the distinct seats of sensation and motion was first made and announced to the world by Magendie in 1822.

Professor Flint has brought out these facts in a very striking and convincing manner, by printing, side by side, the original memoir, as it still stands in the Philosophical Transactions for 1821, and the reprint, as taken from Sir Charles Bell's work on the nervous system. The extracts are given as follows:

Extracts from the Memoirs of Sir Charles Bell, published in the Philosophical Transactions and in his work on the nervous system.[1]

ON THE NERVES; GIVING AN ACCOUNT OF SOME EXPERIMENTS ON THEIR STRUCTURE AND FUNCTIONS, WHICH LEAD TO A NEW ARRANGEMENT OF THE SYSTEM. By Charles Bell, Esq., communicated by Sir Humphrey Davy, Bart., P. R. S. Read, July 12, 1821. Philosophical Transactions, London, 1821, Part I., p. 398, *et seq.*	ON THE NERVES; GIVING A VIEW OF THEIR STRUCTURE AND ARRANGEMENT, WITH AN ACCOUNT OF SOME EXPERIMENTS ILLUSTRATIVE OF THEIR FUNCTIONS. From the Philosophical Transactions, 1821, with some additional explanations. — *The nervous system of the human body, as explained in a series of papers read before the Royal Society of London.* By Sir Charles Bell, K. G. H., etc., etc. Third edition, London, 1844, p. 33, *et seq.*
Original.	*Reprint.*
OF THE TRIGEMINUS, OR FIFTH PAIR. In all animals that have a stomach, with palpi or tentaculi to embrace their food, the rudiments of this nerve may be perceived; and always in the vermes, that part of their nervous system is most easily discerned which surrounds the œsophagus near the mouth. If a feeler of any kind project from the head of an animal, whether the antenna of a lobster or the trunk of an elephant, *it is a branch of this nerve which supplies sensibility to the member and animates its muscles. But this is only if it be a simple organ of feeling, and is not in its office connected with respiration.*	OF THE TRIGEMINUS, OR FIFTH PAIR, *the nerve of sensation and mastication.* In all animals that have a stomach, with palpi or tentacula to embrace their food, the rudiments of this nerve may be perceived; and always in the vermes, that part of their nervous system is most easily discerned which surrounds the œsophagus near the mouth. If a feeler of any kind project from the head of an animal, whether the antenna of a lobster or the trunk of an elephant, *it is by a branch of this nerve that it is supplied with sensibility. But if it be not merely a simple organ of feeling, but in its office connected with respiration, another nerve is added. The trunk of the elephant is not a simple feeler; it is a tube through which it respires, and therefore it has a different nerve superadded, to move it as a hand, and to expand it in the act of inspiration.*
From the nerve which comes off from the anterior ganglion of the leech, and which supplies its mouth, we may trace up through the gradations of animals a nerve of taste and manducation, until we arrive at the complete distribution of the fifth, or trigeminus, in man. Here, in the highest link, as in the lowest, the nerve is subservient to the same functions. *It is the nerve of taste and of the salivary glands; of the*	From the nerve which comes off from the anterior ganglion of the leech, and which supplies its mouth, we may trace up through the gradations of animals a nerve of taste and manducation, until we arrive at the complete distribution of the fifth, or trigeminus, in man. Here, in the highest link, as in the lowest, the nerve is subservient to the same functions. *It is the nerve of the muscles of the jaws, and of common*

---

[1] The passages which have been altered are printed in italics.

muscles of the face and jaws, and of common sensibility. It comes off from the base of the brain in so peculiar a situation, that it alone, of all the nerves of the head, receives roots both from the medullary process of the cerebrum and the cerebellum. A ganglion is formed upon it near its origin, though some of its filaments pass on without entering into the ganglion. Before passing out of the skull, the nerve splits into three great divisions, which are sent to the face, jaws, and tongue. Its branches go minutely into the skin, and enter into all the muscles, *and they are especially profuse to the muscles which move the lips upon the teeth*—(pp. 409, 410).

* * * * *

OF THE RESPIRATORY NERVE OF THE FACE, BEING THAT WHICH IS CALLED THE PORTIO DURA OF THE SEVENTH.

* * * * *

In this extensive distribution, the nerve penetrates to all the muscles of the face; *muscles supplied also with the branches of the fifth pair. Its branches penetrate to the skin accompanying the minute vessels of the cheek*—(p. 411).

EXPERIMENTS ON THE NERVES OF THE FACE.

An ass being thrown, and its nostrils confined for a few seconds, so as to make it pant and forcibly dilate the nostrils at each inspiration, the portio dura was divided on one side of the head; the motion of the nostril of the same side instantly ceased, while the other nostril continued to expand and contract in unison with the motions of the chest.

On division of this nerve, the animal will give no sign of pain; or in no degree equal to what results from dividing the fifth nerve.

sensibility, of taste, and of the salivary glands. It comes off from the base of the brain in so peculiar a situation, that it alone, of all the nerves of the head, receives roots both from the column of sensibility and that of motion. A ganglion is found upon it near its origin, though some of its filaments pass on without entering into the ganglion. Before passing out of the skull, the nerve splits into three great divisions, which are sent to the face, jaws, and tongue. Its branches go minutely into the skin, and enter into all the muscles, *and they are especially profuse to the lips*—(pp. 47, 48).

* * * * *

OF THE PORTIO DURA OF THE SEVENTH NERVE—THE MOTOR AND RESPIRATORY NERVE OF THE FACE.

* * * * *

In this extensive distribution, the nerve penetrates to all the muscles of the face; *muscles supplied also with the sensitive branches of the fifth pair*—(p. 50).

EXPERIMENTS ON THE NERVES OF THE FACE, *with a view to ascertain the uses of the portio dura.*

If an ass be thrown, and the portio dura be cut across where it emerges upon the face, before the ear, all the muscles of the face, except those of the jaws, will be paralyzed, If its nostrils be confined for a few seconds, so as to make it pant and forcibly dilate the nostrils at each inspiration, and if the portio dura be now divided on one side of the head, the motion of the nostril of the same side will instantly cease, while the other nostril will continue to expand and contract in unison with the motions of the chest.

On division of this nerve, the animal will give no sign of pain; or in no degree equal to what results from dividing the fifth nerve.

An ass being tied and thrown, and the superior maxillary branch of the fifth nerve exposed, touching this nerve *gave* acute pain. *It was* divided, *but* no change *took* place in the motion of the nostril; the cartilages *continued* to expand regularly in time with the other parts, which combine in the act of respiration. If the same branch of the fifth be divided on the opposite side, and the animal let loose, he will not pick up his corn; the power of elevating and projecting the lip, as in gathering food, was lost. He will press the mouth against the ground, and at length will lick the oats from the ground with his tongue. In my first experiment, *the loss of motion of the lips was so obvious*, that it was thought a useless cruelty to cut the other branches of the fifth—(pp. 412, 413).

If an ass be tied and thrown, and the superior maxillary branch of the fifth nerve exposed, touching this nerve *gives* acute pain. *When it is* divided, no change *takes* place in the motion of the nostril; the cartilages *continue* to expand regularly in time with the other parts which combine in the act of respiration; *but the sensibility is entirely lost.* If the same branch of the fifth be divided, on the opposite side, and the animal let loose, *the parts will be deprived of sensibility, and* he will not pick up his corn: the power of elevating and projecting the lip, as in gathering food, *will appear to be lost.* He will press the mouth against the ground, and at length lick the oats from the ground with his tongue. In my first experiments *the loss of sensibility of the lips was so obvious*, that it was thought a useless cruelty to cut the other branches of the fifth —(p. 52).

* * * * *

From these facts we are entitled to conclude, that the portio dura of the seventh is the respiratory nerve of the face; that the motions of the lips, the nostrils, and the velum palati, are governed by its influence, when the muscles of these parts are in associated action with the other organs of respiration—(p. 414).

From these facts we are entitled to conclude, that the portio dura of the seventh *is the nerve of motion to the muscles of the forehead, eyebrow, eyelids, nostril, lips, and ear; that is, to all the muscles of the face except those of mastication—that it* is the respiratory nerve of the face; that the motions of the lips, the nostrils, and the velum palati, are governed by its influence, when the muscles of these parts are in associated action with the other organs of respiration—(p. 54).

* * * * *

OF THE FUNCTIONS OF THE TRIGEMINUS, OR FIFTH NERVE, AS ILLUSTRATED BY THESE EXPERIMENTS.

OF THE FUNCTIONS OF THE TRIGEMINUS, OR FIFTH NERVE.

* * * * *

Independently of the difference of sensibility in these nerves, there was exhibited, in all these experiments, a wide distinction in their powers of exciting the muscles. The slightest touch of the portio dura, or respiratory nerve, convulsed the muscles of the face, whilst the animal gave no sign of pain. By means of the branches of the fifth nerve, *it*

Independently of the difference of sensibility in these nerves, there was exhibited, in all these experiments, a wide distinction in their powers of exciting the muscles. The slightest touch of the portio dura, or respiratory nerve, convulsed the muscles of the face, whilst the animal gave no sign of pain. By means of the branches of the fifth nerve, *it*

was more difficult to produce any degree of action in the muscles, although, as I have said, touching the nerve gave great pain—(p. 58).	*was not possible to excite the muscles, if the trunk of the nerve were divided behind the part bruised; that is to say, if the communication with the sensorium were cut off*—(p. 58).

* * * * * * * * * *

The paper from which the above extracts are made does not treat directly of the spinal nerves, but many passages are so worded in the reprint as to make it appear that its author recognized fully the distinction between the motor and sensitive nerves throughout the system; and, as we before remarked, it has been referred to by Shaw and others in evidence that these facts were well known before the publication of Magendie's experiments. In republishing a paper of this kind, the author undoubtedly had a right to make such additional explanations and such corrections as might be demanded by the advanced state of knowledge on the subject; but such alterations should have been so introduced as to be distinguishable from the original matter. Many additions, not bearing on the subject under consideration, have not been quoted;[1] and we have noted some unimportant alterations so as not to destroy the sense of the extracts; but a careful comparison of some of the passages which have been put side by side will make it evident that most of Sir Charles Bell's definite knowledge regarding the seat of motion and sensation in the nervous system was acquired after the first publication in the *Philosophical Transactions.*

In the first extract, in speaking of a branch of the fifth, it will be seen that Bell confounds the two properties of motion and sensation; but he corrects this error in the reprint. He again speaks of this nerve as receiving roots from the medullary process of the cerebrum and the cerebellum; which, in the reprint, he calls "the column of sensibility and that of motion." In the first publication he calls the portio dura simply the "respiratory nerve of the face;" and in the reprint he has modified his phraseology, and speaks of it as the "motor and respiratory nerve of the face." In another place, he details an experiment in which the superior maxillary branch of the fifth was divided in an ass; and in the reprint states that sensibility was entirely lost, etc., but does not mention this in his original paper. He also says, in the same connection, that after this operation "the loss of motion of the lips was so obvious," etc., and in the reprint he has it that "the loss of sensibility of the lips was so obvious." A careful study of the first memoir will show that he never made correct applications of the terms motor and sensory with reference to different portions of the nervous system; and that this memoir of 1821 added nothing, as regards the discovery of the functions of the roots of the nerves, to the paper printed in 1811.[2]

Have any of our readers heard of the Monera? If not, we will illuminate them by giving a sketch of the lowest forms of animal life that have hitherto been discovered, and to which the above title has been applied by Prof. Hackel. It is not long ago that the Amœba was held to be the simplest existing organism; and indeed the naturalist and the microscopist may well ask what can be simpler than a particle of animal jelly no bigger than the point of a pin, unenclosed by membrane or cell-wall, and in which a nucleus and a contracting vesicle, or vacuole, can alone be seen? Surely this is the extreme of simplicity. But as we are told that in the lowest depths there is still a lower deep, so in these rudimentary organisms successive grades are found, each of which is complex, and might be regarded as a superior being to the one below. The presence of a nucleus and of a rhythmically-contracting vacuole constitute such marks of superiority in the Amœba, when compared with the class of creatures we are about to describe. Their presence indicates a rise above the dull dead level of homogeneity, and for aught we know an Amœba may congratulate himself on his superiority in structure and energies to the *canaille* moneres around him. At any rate, he takes advantage of it. The beings in question were first noticed by Hackel during a visit to the Canary Islands, where he found one form, the *Protomyxa aurantiaca*, cleaving, in the form of just perceptible red dots, to the shells of a certain cephalopod. On examining these red spots with the microscope he found that they consisted of a reddish finely-granular spherical mass, enclosed in a transparent homogeneous capsule. "Why, this was an egg," some will exclaim. Not at all; for (note the differences) in the first place it contained no germinal vesicle, spot, or nucleus; and secondly, its subsequent changes were totally opposed to that assumption. It was the animal, if animal it is to be held, in a state of repose, quiescent, encysted. After a time the finely-granular orange-yellow mass breaks up into a mass of smaller balls, like shot in a spherical cartridge, not, however, by continuous division, but as though many centres of attraction had simultaneously formed, none of which, however, have any cell-wall or membrane around them. By-and-by the capsule bursts, the spheres stream out of the rent, and in doing so assume a tadpole-like shape, the head remaining globular, the tail fining off to an invisible point, and the whole wriggling, lashing, and wandering through the surrounding water. Soon the movements become tardy, and the creature settles down to commence a new stage in its existence. It retracts the ciliary appendage or tail, and shoots out irregularly-pointed and dentated processes, termed pseudopodia, from all parts of its circumference. These seize on minute diatoms, radiolaria, and the like, and, though themselves consisting only of a matrix, with a fine mist of granules scattered through it, rapidly appropriate the softer structures of such organisms. When well supplied with food they rapidly grow, forming dendritiform processes, and fingers which creep slowly from point to point. The granules present in the protoplasm enable the eye to perceive that active movements are taking place in the semifluid substance of which it is composed. When a fresh supply of aliment, a delicate morsel, is met with, a rapid stream sets in to that point, and the sarcode, creeping onward—to compare great things with small—like an avalanche, overwhelms and invests the victim. The juices sucked out, the exuviæ are thrust out or left behind as the creature advances in its destructive course; for it envelops, perhaps after rendering helpless by stinging, animals far more active than itself, and no armor is so close that this subtle sarcode cannot penetrate. When it has attained considerable size, vacuolæ or clear spaces form in it; and after a time it probably again becomes encysted, to rise again, like a phœnix, if not from the ashes, at least from the grave of its former self. Our space is limited, or we would have added a few lines descriptive of Professor Huxley's Monera, if he will allow us to call it so, the Bathybius Hackeli, that cleaves to the sounding apparatus as it rises from the profound of 2,000 fathoms, from darkness and silence to light and life and sound, a similar fragment of jelly, but capable of forming a few spicules and shell-like disks of calcareous matter, the first effort after the procurement of food being thus the formation of a skeleton or a support to its yielding body—the first stage of that wonderful series of processes which ultimately result, as so many culminating points, in those forms we call the heads of classes in the vegetable and animal kingdoms.—*Lancet.*

---

[1] The alterations from the original publication in the *Philosophical Transactions* are much more numerous in the late editions of the work on the nerves than in the previous issues. In an edition reprinted in this country (Washington, 1833), the corrections are much fewer.

[2] A paper by Mr. John Shaw, in the *Medico-Chirurgical Transactions*, in June, 1822, some months before Magendie's experiments were published, is said to contain an account of Bell's views of the nerves. The statements here, however, are no more definite than the quotations which we have made from Bell's original writings.

Drs. Purvis and Augusta, colored physicians, engaged in the practice of medicine in Washington, D. C., have been refused admission into the District Medical Society. This action has no relation whatever to the professional standing or the legal rights of these physicians, for they were licensed to practise by the Board of Examiners of the Society. The action is only a refusal on the part of the Society to admit Drs. P. and A. into social fellowship and affiliation.

Mr. T. Spencer Wells, of London, in some remarks recently made before the Obstetrical Society, stated that, in more than twenty cases in his own practice, where ovariotomy had been performed, and the women had subsequently become pregnant, there had been no unusual suffering or difficulty, either during pregnancy or in the labors.

Medical Society of the County of New York.—The paper, at the opening meeting, September 6, of the fall sessions, will be read by Prof. Henry D. Noyes, M. D. His subject will be, "Defects of the Form of the Eye-ball causing Defects of Sight." He will illustrate his remarks by the use of magic-lanterns, illuminated with the oxy-hydrogen light, and will show on the screen the actual conditions obtaining in the eye. The meeting cannot fail to be both instructive and interesting.

Prize.—The famous Riberi prize, to the amount of 20,000 libri (£800), will be distributed for the third time in 1871, by the Royal Academy of Medicine of Turin, to the author of the best work on medicine published during the triennial period of 1868–'70, or to the author of the discovery which shall be considered as having the most largely contributed to the progress of the medical sciences. The works must be written in Italian, French, or Latin, and sent in to the Academy on the 31st of December, 1870, at the latest.

Prizes.—The Editor of the *American Journal of Obstetrics and Diseases of Women and Children* offers the following prizes (in gold) for Essays: $50 for the best essay on "Catarrh of the Uterus, its Etiology and Treatment;" $100 for the best essay on "The Morbid Anatomy of the Placenta;" $50 for the best essay on "Electricity in the Treatment of the Diseases of Infants and Children;" $100 for the best essay on "Congential Deformities and Diseases depending on Maladies of the Uterus or Membranes." The first and third are to be sent to the publishers on or before March 15, 1870. They may be written in English, French, or German.

On the Local Treatment of Croup.—Dr. Weber, of Darmstadt, has recently been employing lactic acid in croup, to the use of which he was led by noticing its remarkable power of dissolving fibrinous exudations. In the first instance he adopted it to clear away the croupal membranes which collected in the canula after the performance of tracheotomy. The beneficial effects were so great that he proceeded to apply it locally before attempting to operate, and, although he receives many cases of this disease into his wards, he has never had any occasion, since commencing its use, to open the trachea. The mode of application of the lactic acid is by means of the inhalation (spray?) apparatus, from ten to twenty drops in half an ounce of water being inhaled, at first every half hour, and then in proportion as the breathing is relieved, the quantity being reduced from ten to five drops in the same quantity of water. He never found it requisite to continue the remedy for more than twelve hours. Usually after the application had been repeated for a few times, he discontinued it, and replaced it by strong camomile tea. The eyes and other parts of the face must be carefully protected from the steam, or its cauterizing effect becomes immediately apparent.—*Lancet.*

A TEST FOR GLYCERIN.—The increased use of glycerin in the arts of late has, of course, brought into the market an adulterated article. When sugar and dextrine were mixed in small proportions with glycerin it has hitherto been difficult to detect the adulteration, but is now easily done by the following method: To five drops of the glycerin to be tested add 100 to 120 drops of water, one drop of pure nitric acid, and three to four centigrammes of ammonium molybdate, and boil the mixture, and in less than two minutes it will assume a deep-blue color if any sugar or dextrine is present.—*Med. and Surg. Rep.*

THE DOCTORS OF HERAT, IN AFGHANISTAN.—General Ferrier says, as in their eyes every European is a doctor, their conversation never ceased running on the healing art, of which they considered themselves distinguished professors. They often brought with them their drugs, in order that I might tell them how to use some chemicals which they had received from India. They gave these chemicals in progressive doses, in all obstinate cases, until they found out the right dose, and in what diseases to use them. Finally, one of them, Mirza Aska, pulled a bottle of cyanurate of mercury from his pocket, and requested to know what devil of a salt that could be. "It has been of little or no use to me," he added, "for of over one hundred patients that I have given it to, all died but one." —*Caravan Journeys* and *Medical Gazette.*

THE TREATMENT OF DYSENTERY BY LARGE DOSES OF SUBNITRATE OF BISMUTH.—M. Maillot, ex-president of the Conseil du Santé des Armées, counts as a great service rendered to his country his introduction into Algeria, in 1853, of this treatment, warmly recommended by M. Monneret. In that year, four pounds of bismuth were forwarded to that country, at his request, for trial, under his observation. The result has been, that it has grown constantly in favor with the regimental surgeons, who have had it included in the troop medicine-chests; and that, in 1868, 920 lbs. weight were required for the treatment of dysenteric affections in the army of Algiers. —*British Medical Journal.*

Appointments.—Prof. J. McNaughton succeeds the late Dr. March as President of the Albany Medical College, and Prof. J. H. Armsby in the chair of Surgery.

George Reuling, M. D., has been appointed Professor of Ophthalmic and Aural Surgery in the Washington University of Baltimore.

St. Louis has started another Medical College—the College of Physicians and Surgeons—with a faculty of seventeen professors. Dr. Bauer, late of New York and Brooklyn, is the President of the Faculty, and Professor of Surgery.

Indianapolis, Indiana, also rejoices in a new Medical College, the organization of which has recently been effected, with a corps of nine professors. An effort will be made to secure one hundred thousand dollars as an endowment of the School, to place it on a permanent footing.

Boston, Mass., *August* 10, 1869.

Editor New York Medical Journal:

Dear Sir: In the July number of the New York Medical Journal there is a notice of a paper read by me before the Massachusetts Medical Society, at their annual meeting, June, 1868. In connection with this review, Dr. Sayre's work on Club Foot is also noticed.

It is not my intention to consider the relative perfection of the cures resulting from the different modes of treatment practised by surgeons of acknowledged ability. But my attention has been called to some unaccountable errors in the reviewer's criticism upon the photographic representations of the cases reported.

The last paragraph, page 378, the reviewer thus writes: "The effect of tenotomy is shown clearly in some of the photographs of Dr. Brown's cures, if the plaster-casts have done him justice. Thus, case 11, *double varus*, although otherwise a fair success, has resulted in double *flat-foot*." If the reviewer considers the result as shown in the photographs of Case XI., taken after treatment, as "a fair success" in the treatment of congenital or noncongenital *varus*, I confess that he does the cure more than justice, and I cannot coincide with him in his opinion of its merits.

But did he examine the photographs of the case before writing his critique? The picture is clear and well defined. If he had done so, he would have seen, instead of "*double* *varus*," that the case was one of *double* VALGUS, *and that, originally, there was not merely flat-foot*, but a well-shown convexity or prominence of the inside of the sole in place of the natural arch of the instep; in other words, a doubling upward from the centre toward the heel and toes.

If this extraordinary condition of the foot was changed by treatment into a simple flat-foot with the heel and toes well applied to the ground, as shown in the second photograph of this case, plate 1, numbers 4 and 6, and if, in one foot, still further improvement is evident, and there is some slight normal concavity at the instep, then I think a candid observer would admit that more than an average success had been obtained.

If your reviewer had, by chance, referred to the description of the case in the text, he would have found it headed, not "*double varus*," but "*Paralytic Calcaneo Valgus, the Result of Spira Bifida*." He would have there seen a minute description of the case; that the feet having been drawn upward, upon or toward the outside of the leg, there was, in fact, dislocation of the astragalus. "It is evident that in the left foot the articular facet of the astragalus, instead of being applied against the internal malleolus, does not enter into the composition of the ankle-joint, but, with its rounded internal face, and with the scaphoid, forms the projection on the inside of the foot." (Cases in "Orthopedic Surgery," p. 6.) A second glance at the representations would have assured him that the patient must have originally walked upon these prominences and upon the inner margin of the foot.

Although I do not agree with the writer that the picture shows a "fair success" in talipes varus, for I should regret extremely to have such a success pass out of my hands as the termination of treatment of a case of varus, yet as the result of treatment, in such a case as described in the text, I think it may be justly so considered.

The paragraph in the review, from which the above is quoted, continues thus: "Case III., varo-dorsalis, results in a similar condition, but with marked dropping of the heel, i. e., traumatic calcaneus from tenotomy. Almost identical is the result in Case V., varus paralytica. Again, in Case X., equinus, the same accident (flat-foot) has occurred." The chief danger to be apprehended in the treatment of congenital varus, varo-dorsalis, or equinus, for the first few weeks, is recontraction of the tendo-Achillis. Calcaneus, or too great lengthening of this tendon, is rarely, in truth I may say, in careful hands is never, the result of tenotomy in such cases.

To make evident the perfect freedom of action in the ankle-joint, and that the feet could be normally flexed, in a word, to show that this recontraction had not occurred, and that there was no probability of its occurring, the casts of the feet after treatment, in the cases above cited, were taken while the feet were in a flexed position. It was thought that some of the casts, exhibited on the occasion referred to, should be moulded in such a manner as to make this fact, among others, evident. Cases III., V., and X., were among those taken in this way, that is, with the feet flexed at more than a right angle. In each, the action of the gastrocnemius is perfect, admitting of complete normal extension, as well as flexion of the feet. It was believed that any one who had given even a casual attention to the subject must be familiar with the facts above stated, and would understand the object of taking the feet in this position, and appreciate the perfection of the cure which could not have been so fully exemplified in any other way. It certainly was not thought possible that any one thus fitted to judge could so misconstrue the position of the foot as to imagine that calcaneus had occurred. All who have treated such cases are aware of the inherent difficulty attendant upon procuring perfect flexion at the ankle-joint. It is comparatively an easy and simple matter to obtain a straight foot; to remove all distortion at the medio-tarsal articulation. This is, in general, readily accomplished, and a good-looking foot at right angles with the leg is the result—a result satisfactory to the friends of the patient, who compare the present state with the past. But should the surgeon be satisfied? Can he rest so long as he has not obtained what *he* knows is a *sine qua non* of a good working foot? Perfect normal flexion at the ankle-joint is quite a different thing, and much more difficult to accomplish. A straight foot at right angles with the leg has a fair appearance, but, if it cannot be raised, by the volition of the patient, to more than a right angle, he still walks stiffly, and it is impossible for him to ascend a hill or a flight of stairs, without either stubbing his toes or turning his foot out, or in, and thus risking a return of the deformity.

In regard to "the accident" stated as having occurred in Case X., namely, "flat-foot," a glance at the photograph is sufficient refutation. It is there evident that talipes equinus has been changed into a foot capable of normal flexion at the ankle, and certainly with sufficient arching of the sole to prevent its being mistaken for a flat-foot.

BUCKMINSTER BROWN, M. D.

DEATH FROM CHLOROFORM.—Mrs. Emily Banker, wife of John S. Banker, of Hart's Falls, died suddenly at the house of Dr. Z. Cotton, of that place, while under the influence of chloroform, administered for the purpose of extracting her teeth. The doctor, assisted by his brother, administered chloroform in the usual way, and extracted three teeth. The patient came out all right. He gave her a second inhalation, and extracted nearly all the remaining teeth. This time she rallied, and showed no signs of distress. There being two stumps remaining, she insisted on taking it again, and inhaled the third time. Having extracted the remaining teeth, he noticed that respiration had nearly if not quite ceased. He threw her forward to let the blood run out of her mouth, and, finding no symptoms of returning life, laid her on the floor and attempted artificial respiration, but it was of no avail. Coroner Kennedy was summoned next morning, and a jury empanelled. Drs. James Nelson and O. M. Bump were called in, and gave an opinion that death had ensued by asthenia of the heart from the use of chloroform. The jury rendered a verdict that Mrs. Banker died from the use of chloroform, for the purpose of extracting teeth, and that it was judiciously and properly administered, and that no blame can attach to Dr. Cotton. It might be stated, in addition, that her family physician had advised her that it would be safe, as far as he knew, for her to take chloroform."—*Cambridge* (*N. Y.*) *Post*, and *Dental Cosmos*.

Caution to Ovariotomists.—Professor Braun, of Vienna, relates a case of ovariotomy (*Wiener Wochenschrift*, Nos. 23 and 24) which proved fatal from hæmorrhage twenty-three hours after the operation. At the *post mortem* a piece of sponge was found which had been left in the cavity of the abdomen, but all present agreed that it had in no wise contributed to the fatal issue. As all the sponges used were numbered, it is supposed that this piece must have broken off from one of them. At all events, had the patient lived it might have given rise to unpleasant complications. We presume this is the case which gave rise to the report that Professor Billroth had left a sponge behind after ovariotomy, and for spreading which he brought an action against Dr. Kraus, editor of the *Wiener Medical Zeitung*, notwithstanding the apologies and regrets for the error which he offered to publish.—*Medical Times and Gazette.*

The Boston correspondent of the *California Medical Gazette*, in referring to the increase of hereditary syphilis in that city since the late war, as compared with previous years, says:

I cannot at present give the results of the observations of other gentlemen in this regard, but my own experience at the Dispensary leads me to believe that this class of cases is much more numerous than formerly. Before the war, and even down to 1865, these cases were not by any means common among dispensary patients. During my term of service in the children's room in the months of January, February, and March, 1866, I saw but three cases of syphilitic disease in infants. During the same term in 1867, five cases. In the same term, 1868, over thirty cases, and as many more during corresponding months of the present year. The state of this disease would correspond to the time at which men, who had served in the army and married subsequent to their discharge at the close of the war, would naturally have their first children born to them. Perhaps it may be said that, providing my supposition be correct, the increase in these cases should have commenced before it really did; but abortions in the first pregnancies after the contraction of syphilis by either the father or the mother are so common, that very few syphilitic infants from the families of men of the class referred to, or those born since the close of the war to men married previous to their seeing service, would probably be seen before 1868.

Perhaps this increase of hereditary syphilis is not wholly chargeable directly to army life, for the conditions of social life among the classes from which these cases come are such as might well lead us to suppose that the fathers are not the only culprits in this matter.

The enormous number of patients treated at our city dispensaries ought to furnish a means of definitely determining whether this increase is general, or whether that observed in Boston is only an accidental coincidence.

NON-LIGATION OF THE UMBILICAL CORD.—Dr. M. B. Kellar, of Cincinnati, reports, in the *Lancet and Observer* for June, fifteen cases in which the cord was divided after the method proposed by Dr. King, of Washington, and left without a ligature. The cases he compares with fifteen others, in which the cord was ligated and cut in the usual manner. The testimony adduced by Dr. K. is certainly in favor of non-ligation of the cord.

MEDICINE AND MORMONISM.—Brigham Young, in a sermon recently preached at Salt Lake City, while speaking of miracles, thus paid his respects to the physicians:

> I will tell you when I need them—when my family are sick, and they need something to counteract the principle of death working in their systems. Under such circumstances some might want to administer an emetic to the sick, which might

be very well if they lacked faith; but, if we have faith to feel that the issues of life and death are in our power, we can say to disease: "Be ye rebuked in the name of Jesus, and let life and health come into the system of this individual, from God, to counteract this disease;" and our faith will bring this by the laying on of hands by administering the ordinances of the holy gospel. I am happy to say I have never been under the necessity of calling a doctor to my family for forty years. I have had them in my family, but not from necessity. I like them when they are gentlemen; when they are wise and full of intelligence I am very fond of them, but I do not ask them to doctor my family in any case, and there are no circumstances under which I think them necessary except in case of a broken bone, or where skilful mechanical or surgical aid is necessary. But to call a doctor to my family to administer physic to them—I am not under the necessity of doing it. Is this so? Yes, it is; and if the experiment could be tried, independent of the gospel and of faith, in any community, I care not where, nor for what length of time, of having any number of persons, with regularly-qualified physicians to attend them, and the same number without physicians, but who will doctor themselves according to Nature and their own judgments, among that portion without doctors there would be less sickness and fewer deaths than among those who had their doctors. The experience of the Latter-day Saints in Utah confirms this. When we first came here we had no sickness, and we had no sickness until we had doctors. When they began to obey the gospel they did not want to dig in the field, hoe potatoes, go to the cañon for lumber or wood, to secure for themselves and families the necessaries of life, but they wanted to live by doctoring the people; and from that time on, as we got richer and built warm houses, and have lived more richly, indulging in sweet-cake, plum-pudding, roast beef, and so on, we have had more or less disease among us.

PHYSICAL CULTURE AT AMHERST COLLEGE.—Dr. Nathan Allen, of Lowell, whose name is familiar to our readers, for his writings on the causes of decline in the increase of native American population, is also trustee of Amherst College. We learn this fact from a highly-suggestive pamphlet just prepared by him at the request of his co-trustees, the circulation of which we shall heartily recommend and do our best to further. It is entitled "Physical Culture in Amherst College," and affirms of that institution a higher regard and provision for the health of its members than can be predicated at least of any American college, and which, perhaps, has nowhere been surpassed in an educational establishment. We know for certain that in Germany, even, the gymnasiums of the *Gymnasia* and high-schools are very much neglected, and for the reason that attendance is voluntary. It is voluntary with us, in all other places than at Amherst, we believe, and there the assignment of a fixed time and period in the day's course for exercise in the gymnasium is the novel and vital principle that distinguishes the college. The instructor in this department is not a boxer merely, or a fancy performer, but a "Professor of Hygiene and Physical Education," who deserves the name; a gentleman of culture, a college graduate, and a physician. His work is only half-confined to the gymnasium. He is the inspector of the health of the students, and confidential adviser, warning from vice, and enforcing sanitary habits, and keeping statistics that every year grow to be more and more valuable, by which the health-rate and rate of physical development of the students are accurately shown, along with their punctuality and fidelity in attendance, etc., etc. The gymnasium is open all the day, but for half an hour class-exercises are compulsory under a leader and in uniform; at night the building is closed, and it is never lighted. We presume this last to be a wise regulation, and yet exercise by night is only *less* beneficial than by day, and in theory the evening gymnasium should offer one additional guarantee against temptation to evil resorts. Dr. Allen not only gives the history of this scheme, but enters into general considerations of the comparative merits of various modes of exercise, with which we do not wholly agree, though what he has to say on the supposed antagonism between "light" and "heavy" gymnastics is quite to our mind. On one other point he seems not to have reasoned out the matter carefully:

> (P. 21.) "An examination of the table, showing the number of absences in the different class from these exercises, does not speak well for the higher classes—that the absences should increase with each class—so that those of the Senior class are almost twice as many as those of the Freshman class."

Here he omits to take account of the elements of novelty, of enthusiasm, of a stronger sense of subordination, and of a real need for the exercises, on the part of the Freshmen, who are also least concerned about the careers to which they will be dismissed from college. And what is the result of this diminishing attendance?

> (P. 27.) "But the most marked evidence of improved health is found in the diminished sickness of every class each year after entering college. In a table giving the amount of sickness arranged by classes, it seems there has been for these eight years on an average *more than three times* as much sickness in the *Freshman* Class as in the *Senior*."

Does exercise, then, go six times as far with the Seniors as with the Freshmen? Assuredly not; but after three years of scientific exercise a man needs comparatively little to keep himself in better health than those to whom the discipline of the gymnasium is wholly new.—*Nation.*

The Supposed Cholera Fungus.—The July number of the *Monthly Microscopical Journal* contains some critical observations on Dr. Hallier's hypothesis as to the origin of cholera from parasitic fungi, by one who has every title to be heard on such a subject—the Rev. M. J. Berkeley. After stating that two of the most promising young officers of the Indian and British medical services respectively had been selected to investigate the subject fully in India, and after referring to the three reports published by those gentlemen in this journal, comprising the results of their labors up to their departure for India, Mr. Berkeley proceeds to show that Dr. Hallier's observations were of altogether too vague and undecided a character to inspire much confidence. "Great pains," we are told, "have been taken by Mr. Thwaites, the acute director of the Botanical Garden, at Perideniya, in Ceylon (than whom few have a more intimate acquaintance with cryptogamic plants), to acquire every possible information, both in India and Ceylon. All his inquiries, however, have failed to detect a single fungus on the rice-plant, even distantly allied to the Urocystis (*Polycystis Auct.*); indeed, the only fungus which has been detected is a little species of Cladosporium, differing from the universally diffused *Cladosporium herbarum*, and which, like that, is clearly an aftergrowth, and not a true parasite. Among some seven thousand numbers of fungi from North and South Carolina, not a single one occurs on rice." Mr. Berkeley adds: "An attentive perusal of the report of what Drs. Cunningham and Lewis saw at De Barry's, and the instructions derived from him, as well as that of their conference with Dr. Hallier, will be quite sufficient to make us receive Dr. Hallier's views with much less attention than they have attracted in certain quarters." In alluding to the opportunity he had of examining Professor Huxley's preparations, Mr. Berkeley says he saw sufficient to hope that Professor Huxley would continue his investigations, and he thinks that he has exercised a very wise discretion in not publishing his observations too hastily. The preparations given by Hallier as to the connection of fungi with scarlet fever, etc., proved absolutely nothing. It would be folly to blind the eyes to the experiments of Pouchet, Child, Bennett, and others, as to what is called the atmospheric-germ theory; but, whatever may be the origin of the minute bodies in question, whether from preëxistent spores or the fortuitous concourse of chemical and other energetic forces, it is a matter of immense importance to ascertain whether they have any connection with disease, and it is obvious that the question as to their origin becomes essential. At present, however, according to Mr. Berkeley, there is no proof whatever that different fevers owe their origin to different parasitic fungi, or that especial forms of the same common species appear constantly in the several forms of fever, a circumstance for which there is better evidence, perhaps, as regards certain skin-diseases. It is, however, unfortunate that writers on these subjects are seldom persons who are well acquainted with fungi.—*Lancet.*

From the address of Sir William Jenner, M. D., at the annual meeting of the British Medical Association at Leeds, we take the following paragraph, which must find a ready response from all those of our profession who entertain enlarged views of the nature of the work they are engaged in:

Many entertain skepticism as to the value of medicine as an art, and especially as to the remedial power of drugs. "I trust you will not cast a doubt on the efficacy of medicine," said a distinguished member of our profession. "They do not believe much in drugs at this hospital," wrote a reporter to one of our medical journals. I desire to repudiate skepticism in regard to medicine. I believe as confidently in the power of the physician to treat disease successfully, as I did when clinical clerk to one of the first practical physicians of his day. Extended knowledge and accumulated experience have only increased my confidence in the remedial powers of our art. Nor do I believe that others, upon whom the imputation of skepticism has been cast, are less firm believers than myself in the value of treatment. Modern research has shown that a large number of acute diseases, occurring in previously sound persons, have a tendency to terminate in the suspension of health, even although no drug be given. This is fact—knowledge—not skepticism. Modern observation has also shown that certain acute diseases, formerly supposed to be of indefinite duration, run a definite course—that is, end spontaneously at a certain date from their outset; and, therefore, the conclusions as to the efficacy of drugs to cut short these diseases—conclusions drawn before their definite duration was known—were founded upon false premises, and consequently were not trustworthy. All this is surely fact—knowledge—not skepticism. Again, advances in knowledge have frequently been attended by a more correct appreciation of the mode of action by drugs; and the expression of this has not unfrequently been most erroneously taken as an evidence of skepticism. Thus, if I believe that saline aperients do not act as I formerly supposed they did—namely, by increasing the escape of watery matter from the radicles of the portal vein—I am not in the least shaken in my belief that the symptoms which I attribute to over-distention of the portal vein are relieved by their action; or that their action is followed by a disappearance of watery fluid from the peritoneal cavity, and from the cellular tissue. Again, if it should be considered, as proved by experiments on dogs, that mercurials did not produce increased secretion of bile in man, it would not throw doubt on the establishment of a great flow of a yellowish-green colored fluid from the bowel after the administration of a mercurial to man, and the relief of many depressing symptoms which follow. A man's bilious headache, as it is termed, would be none the less certainly cured by mercurial treatment, even though it should be shown to the satisfaction of the whole profession that mercury does not increase the secreting power of the liver. Our mode of explaining certain effects in curative medicine would be changed, but not the facts themselves. My conclusion, then, is, that although, with regard to the virtues of this or that particular drug, and the mode of action of this or that particular class of remedies, there is, no doubt, and always will be, difference of opinion—the evidence that satisfies A. being insufficient, from the constitution of his mind, to satisfy B.—yet with regard to the value of drugs in the abstract, and the value of treatment, there is really little difference of opinion among physicians well informed as to the present state of medical knowledge, and of equal experience in practice.

From the Report of Dr. Snow, City Registrar, Providence, R. I., for the month of July, 1869, we extract the following:

We are treated at this season with the usual amount of cautions in the newspapers against the use of fruits and vegetables, and are called upon to believe that the increase of mortality which always occurs, during hot weather, is almost wholly caused by eating them. It is quite likely that eating unripe and wilted fruit and vegetables causes disturbance in the stomach, and sickness; but it is of a temporary character, and would generally cure itself if no other cause were present. It is well to use caution in the selection of fruit and vegetables, avoiding those that are wilted and decayed, but it is not well to be unnecessarily troubled and frightened about them, and it is still worse to avoid them altogether.

The slightest examination of the causes of death shows that fruit and vegetables had almost no influence whatever in the mortality reported from summer complaints. Nearly all the decedents from these causes were very young children who do not eat fruit and vegetables at all. All but five of the decedents from summer complaints, in July, were under two years of age, and only two of the whole number were over four years of age.

In certain seasons, when epidemic cholera may be present, and when the systems of the people may be prepared for disease by the poisoned air they breathe, it is possible that wilted fruit and vegetables may be the exciting causes of fatal sickness; but even then the air that is breathed is more truly the cause of death than the food that is eaten. In ordinary seasons, when no epidemic is present, impure air causes a thousand-fold more mortality than fruit and vegetables. In fact, it is probable that total abstinence from fruit and vegetables by the whole community would produce more fatal sickness than the most unlimited indulgence in them. The safest rule is, however, temperance in all things.

The Therapeutic Use of Iron.—Iron is probably one of the most certain remedies to directly promote oxidation we possess; and, when used in right quantity and at the right time, it seems as though its progress could be watched, and its benefit accurately determined, by the improved color of the blood. When a soluble salt of iron is taken, some of it is converted into a sulphuret in a few hours, or is reduced to an oxide in the bowels, and, thus losing its solubility and power of diffusion, it is thrown out of the system as perfectly inoperative as if it had never been taken. Another part, escaping precipitation, remains dissolved, and passes, in from seven to ten minutes, when the stomach is empty, into the blood and urine, where it may be detected, by the ordinary chemical tests, partly oxidized, if capable of oxidation. This also is perfectly useless, unless some local action of iron is required on the urinary passages, or bladder. A third part, instead of passing off in the urine, diffuses from the liquor sanguinis, not only into every texture, but also into the blood-globules and white corpuscles, causing a greater formation of hæmoglobulin, and thereby promoting that combination with protagon on which the production of new blood-globules depends. These blood-globules exercise a chemical action on the oxygen of the air, which the membrane of the air-vesicles transmits, and they and the fibrin together appropriate the incoming oxygen, and carry it to the capillaries, whence it must diffuse into each and every structure to support the oxidation which takes place everywhere. Hence, speaking generally, the more iron we absorb the more blood-globules we may, and probably will, form; the muscles also become richer in hæmoglobulin, more oxygen is taken to the capillaries, and more oxidation takes place in the tissues and in the blood.—*Bence Jones.*

An association, styled the Southern Historical Society, has been formed, having its headquarters in New Orleans (with branches in all the Southern States), for the purpose of collecting material available for a history of the late rebellion. One of its objects, which should interest every medical man throughout the country, is the preservation of the medical records of the late Confederate army. Prof. Joseph Jones, of New Orleans, is the Secretary, and his well-earned reputation for patient and thorough research will be a guarantee for the faithful performance of his arduous duties. We cordially invite such of our readers as were engaged in either army during the late war to give him all the aid in their power, and we can assure them that their material will be conscientiously and impartially used.—*Medical Record.*

We give publicity to the following note, which appears in the *Boston Medical and Surgical Journal*, for August 12, 1869, on account of the great importance that attaches to the solution of the question of the relative danger from the inhalation of chloroform or ether:

Mr. Editor: My attention having been called to a statement made by Dr. E. Powell at the last annual meeting of the Illinois State Medical Society, and published in the *Chicago Medical Examiner*, vol. x., No. 7, July, 1869, at p. 407, to the effect that "he saw, a few years since, ether administered to a patient in the [City] Hospital at Boston, Massachusetts, who died directly from the effects of the inhalation," I beg leave to say that I remember perfectly that on one occasion Dr. Powell was present in the amphitheatre of the City Hospital. I was operating on a patient, by Syme's operation, for perineal section. He became very seriously affected under the etherization; the operation was suspended; stimulants and artificial respiration were employed; the patient rallied; the operation was resumed and completed without further etherization, and the patient subsequently lived *twenty days*, and died of pyæmia. He was found to have had a serious valvular disease of the heart. He was an old man, enfeebled by extravasation of urine. For the details I would refer to the hospital records, vol. xv., p. 104.

As the statement of Dr. Powell was wanting in precision and void of fact, I have thought it right to place the whole truth before you. No case has yet occurred at the City Hospital of death from an anæsthetic. Sulphuric ether (Squibb's, or Powers and Weightman's) is the anæsthetic employed in this hospital.[1] Respectfully,

D. W. Cheever, M. D.,
One of the Surgeons of the Boston City Hospital.

The *Medical Reporter*, of St. Louis, Mo., has suspended publication.

The Cholagogue Action of Mercury.—Under the direction of Dr. Hughes Bennett, of Edinburgh, a committee of gentlemen have been experimenting on dogs with various preparations of mercury, and with podophyllin and taraxacum.

The result of their labors, which extended over two years, may be given in their own language, thus:

The foregoing observations seem to us clearly to show that blue pill, calomel, and corrosive sublimate, when given to dogs in either small, gradually augmented, or in large doses, do not increase the biliary secretion; they do not even influence it, so long as neither purgation nor impairment of health is produced, but they diminish it as soon as they produce either or both. It may be urged that, although we have proved this regarding dogs, it does not follow that on man these drugs will have the same action. It must be admitted that some animals are altogether insensible to remedies which produce powerful effects on others; that different doses are often requisite to occasion similar results; and that there may be peculiarities so very decided as to render it impossible to infer what will be the action of a remedy on one animal from its influence upon another. But have we any reason to conclude that in the present instance there exists such difference in the action of mercury as to prevent any inference being drawn from the dog regarding man? All the facts with which we are acquainted show that it is legitimate to infer that the action of mercury ought to be regarded as similar in both cases. We have demonstrated that, as regards its action upon the salivary glands, mouth, intestine, appetite, and general nutrition, the influence of mercury is the same. We therefore infer that it is in the highest degree probable that its action on the hepatic secretion will also be the same. The only difference that there seems to be between the dog and man, as regards the action of mercury, consists in the fact that in the dog larger doses are generally required to produce the same effects as those observed in man. But even here it may be argued that more marked results are required to satisfy the observer, and hence the greater dose necessary. These circumstances, therefore, cannot be held as affecting the conclusion at which we have arrived.

---

[1] As we are about going to press, we would here say that we wrote to Dr. Powell, a week ago yesterday, asking him for further advices as to what he saw in the case he alludes to in "the hospital in Boston, Massachusetts." His reply has not yet come to hand.—*Editor*, *August* 10, 1869.

We have been unable to discover any facts brought to light in this or in any other age which prove that mercury stimulates the biliary secretion. So far as we can make out, the notion that it does so originates in some vague statement made by Paracelsus, or the authors of his time, as to the good effects of mercury in what he has called "icteritia." But we repeat, not only do we not know how such a notion has arisen, but we are ignorant how to make direct observations on the subject in man. We have already stated that such observations are, in the present state of physiological chemistry, impossible. We do not deny the possibility of mercury being useful in some diseases of the liver. We simply say that the notion of its doing good by increasing the biliary secretion is untenable.

But some may say that, although we have proved that mercury diminishes the biliary secretion in dogs, and that in man its action will in all probability be the same, yet our experiments have been performed on animals in a state of health; and that, had they been made on dogs with diseases such as those in which mercury had been *supposed* to increase the hepatic secretion, it would possibly, in the case of such dogs, have been increased. With such an hypothesis we need not seriously occupy ourselves until the objectors *prove* that, in any case whatever, mercury can increase the biliary secretion in man.

The relation of the biliary secretion to the amount of food ingested was found to vary much: in some cases, the flow of bile being greatly influenced by the amount of food taken; in others, not affected at all. In one case, the bile was greatly reduced by starvation; in others, not increased by increased nourishment. Of podophyllin and taraxacum the committee say:

1. Doses of podophyllin, varying from two to eight grains, when given to dogs, diminished the solid constituents of the bile, whether they produced purgation or not.

2. Doses which produced purgation lessened both the fluid and solid constituents.

3. During an attack of dysentery, both the fluid and solid constituents of the bile were greatly lowered.

4. Doses of the solid extract of taraxacum, varying from 60 to 240 grains, affected neither the biliary secretion, the bowels, nor the general health of the animal.

The observations of the committee conclusively show that purgation, produced by a variety of causes, diminished both the fluid and solid constituents of the biliary secretion. Spontaneous diarrhœa, dysentery, purgation produced by pilula hydrargyri, by calomel, by corrosive sublimate, and by podophyllin, always diminished the solid constituents of the bile, and, with one exception, the fluid portion of the bile also. That purgation diminishes the biliary function of the liver, is one of the most important facts established by the committee. It is, however, nothing more than what might have been expected, seeing that purgation drains the veins that supply the liver with blood, from which the bile is almost entirely formed.

It was found that the animals operated on, though they might live a considerable time in good health, eventually died of inanition; although in the case of one dog, where the bile was not allowed to flow into the intestines for five months, yet he *gained* flesh and weight. Hence it is probable the bile is merely an excretion, and not a secretion essential to digestion. Exercise was found to empty the liver of its bile, and increase the quantity in the receptacles fitted into the fistulous openings connected with the dog's bile-ducts, a result supposed to be due to the compression of the liver by the abdominal muscles. We would advise our brethren to accept this hint, and to take, when they feel bilious, not blue pill but a brisk walk; for, if bile be an excretion, a something to be got rid of, and mercury suppresses the excretory action of the liver, and exercise promotes it, it follows most certainly that mercury is an injudicious remedy, and walking a wise one. Mercury is a drug powerful for good or evil. The tendency of medical opinion is strongly set toward its evil power; but, as doctors are said to have led public opinion astray in refusing to bleed under any circumstances, so, we trust, they will not induce a blind want of faith in a remedy of long standing; will not lead us from the pale of positive belief to the pale of negative trust; from the Scylla of confidence to the Charybdis of denial.—*The Druggist.*

LEECHES.—Paris is the best market in Europe for leeches. The mouth of the Danube is now the best fishing-ground, and no less than £120,000 in value of leeches are annually sent to Paris from Trieste. The best leech is said to be a native of

Australia, as he does his work in a shorter time than any other. The viceroy of Egypt has granted a monopoly of 3,000,000 leeches annually, which are to be found in the bed of the Nile after the periodical inundation of that river, to a French dealer. On arriving in Paris, those not required for active duty are sent to Gentilly, where they are lodged in reservoirs provided with greasy mud and filled with greenish water.—*Jour. Soc. of Arts.*

Antidote to Phosphorus.—The value of essence of turpentine as an antidote to the effects of phosphorus has long been recognized in Paris as well as in London, and M. Personne, apothecary at the Hospital of La Pitié, has brought the question before the scientific world by a series of experiments upon dogs; he has found that in all cases, in which turpentine has been administered to the animals a few hours after they had taken phosphorus, they exhibited symptoms of intoxication, but recovered; whereas, when turpentine was not given, they invariably died. In other cases, in which turpentine was given immediately after the phosphorus, the animals were scarcely made ill at all.—*Jour. Soc. of Arts.*

Modes of distinguishing True and Apparent Death.—It has been judiciously remarked that it would be a good plan to spread the knowledge of the sure and certain characteristics which enable us to distinguish every form of lethargy from real death. It cannot be denied that, at the present epoch, the utmost pains are taken to popularize every kind of knowledge. Nevertheless, it makes slow way through the jungles of prejudice and vulgar error. Not long ago it was over and over again asserted that an infallible mode of ascertaining whether a person was dead or not was, to inflict a burn on the sole of the foot. If a blister full of water resulted, the individual was not dead; if the contrary happened, there was no further hope. This error was unhesitatingly accepted as an item of the popular creed.

The Council of Hygiene, applied to by the government, indicated putrefaction and cadaverous rigidity as infallible signs of actual death. In respect to the first, putrefaction, a professional man is not likely to make a mistake; but nothing is more possible than for non-professionals to confound hospital rottenness, gangrene, with true *post-mortem* putrefaction. M. de Parville declines to admit it as a test adapted for popular application. Moreover, in winter, the time required for putrefaction to manifest itself is extremely uncertain.

The cadaverous rigidity, the stiffness of a corpse, offers an excellent mode of verifying death; but its value and importance are not yet appreciable by everybody, or by the first-comer. Cadaverous rigidity occurs a few hours after death; the limbs, hitherto supple, stiffen; and it requires a certain effort to make them bend. But when once the faculty of bending a joint is forcibly restored—to the arm, for instance —it will not stiffen again, but will retain its suppleness. If the death be real, the rigidity is overcome once for all. But, if the death be only apparent, the limbs quickly resume, with a sudden and jerking movement, the contracted position which they previously occupied. The stiffness begins at the top, the head and neck, and descends gradually to the trunk.

These characteristics are very clearly marked; but they must be caught in the fact, and at the moment of their appearance: because, after a time, of variable duration, they disappear. The contraction of the members no longer exists, and the suppleness of the joints returns. Many other symptoms might be added to the above; but they demand still greater clearness of perception, more extended professional knowledge, and more practised habits of observation.

Although the French Government is anxious to enforce throughout the whole empire the rules carried out in Paris, it is to be feared that great difficulties lie in the way. The verification of deaths on so enormous a scale, with strict minuteness, is almost impracticable. But even if it were not, many timid persons would say: "Who is to assure us of the correctness of the doctor's observations? Unfortunately, too many terrible examples of their fallibility are on record. The professional man is pressed for time. He pays a passing visit, gives a hurried glance; and a fatal mistake is so easily made!" Public opinion will not be reassured until you can show, every time a death occurs, an irrefutable demonstration that life has departed.

M. de Parville now announces the possibility of this great desideratum. He professes to place in any one's hands a self-acting apparatus, which would declare, not only whether the death be real, but *would leave in the hands of the experimenter a written proof of the reality of the death.* The scheme is this: It is well known that atropine—the active principle of belladonna—possesses the property of considerably dilating the pupil of the eye. Oculists constantly make use of it, when they want to perform an operation, or to examine the interior of the eye. Now, M. le Docteur Bouchut has shown that atropine has no action on the pupil when death is real. In a state of lethargy, the pupil, under the influence of a few drops of atropine, dilates in the course of a few minutes; the dilatation also takes place a few instants after death; but it ceases ab solutely in a quarter of an hour, or half an hour at the very longest: consequently, the enlargement of the pupil is a certain sign that death is only apparent.

This premised, imagine a little camera-obscura, scarcely so big as an opera-glass, containing a slip of photographic paper, which is kept unrolling for five-and-twenty or thirty minutes by means of clock-work. This apparatus, placed a short distance in front of the dead person's eye, will depict on the paper the pupil of the eye, which will have been previously moistened with a few drops of atropine. It is evident that, as the paper slides before the eye of the corpse, if the pupil dilate, its photographic image will be dilated; if, on the contrary, it remains unchanged, the image will retain its original size. An inspection of the paper then enables the experimenter to read upon it whether the death is real or apparent only. This sort of declaration can be handed to the civil officer, who will give a permit to bury, in return.

By this simple method a hasty or careless certificate of death becomes impossible. The instrument applies the test, and counts the minutes. The doctor and the civil officer are relieved from further responsibility. The paper gives evidence that the verification has actually and carefully been made; for, suppose that half an hour is required to produce a test that can be relied on, the length of the strip of paper unrolled marks the time during which the experiment has been continued. An apparatus of the kind might be placed in the hands of the minister or one of the notables of every parish. Such a system would silence the apprehensions of the most timid. Fears—natural enough—would disappear, and the world would be shocked by no fresh cases of premature burial.—*All the Year Round.*

ERRATA.—In Dr. Lusk's article on Uterine Cancer, p. 561, for Lanchou read Tanchou.

P. 518, note 4, for Verträge read Vorträge.

P. 566, for Schonberg read Scirrhus.

P. 574, for Liber read Leber—for Brich read Birch.

COLUMBIA UNIVERSITY LIBRARIES

This book is due on the date indicated below, or at the expiration of a definite period after the date of borrowing, as provided by the library rules or by special arrangement with the Librarian in charge.

DATE BORROWED	DATE DUE	DATE BORROWED	DATE DUE
C28(842)M50			

COLUMBIA UNIVERSITY LIBRARIES
0062045210